

UNITED STATES OF AMERICA
U.S. NUCLEAR REGULATORY COMMISSION

BRIEFING ON FORT CALHOUN

JANUARY 8, 2013

9:00 A.M.

TRANSCRIPT OF PROCEEDINGS

Public Meeting

Before the U.S. Nuclear Regulatory Commission:

Allison M. Macfarlane, Chairman

Kristine L. Svinicki, Commissioner

George Apostolakis, Commissioner

William D. Magwood, IV, Commissioner

William C. Ostendorff, Commissioner

APPEARANCES

Omaha Public Power District (OPPD):

W. Gary Gates
OPPD President and Chief Executive Officer

Kerry Ihnen
Manager, Nuclear Oversight, OPPD

Lou Cortopassi
Fort Calhoun Station Site Vice President & CNO

Mike Prospero
Fort Calhoun Station Plant Manager

Susan Landahl
Exelon Senior Vice President of New Development

Mohamad (Mo) Doghman
OPPD Vice President of Energy
Delivery & COO

NRC Staff:

Bill Borchardt
Executive Director for Operations

Elmo Collins
Regional Administrator, Region IV

Louise Lund
Deputy Director, Division of Operating Reactor Licensing,
NRR

Michael Hay
Branch Chief for Project Branch F, Division of Reactor
Projects, Region IV

1 PROCEEDINGS

2 CHAIRMAN MACFARLANE: Okay. Everybody here? Good.
3 Good morning. Today's meeting is going to focus on the Omaha Public Power
4 District's recovery plan, and the agency's oversight of the Fort Calhoun Station in
5 Nebraska.

6 Fort Calhoun has been in the NRC's inspection manual Chapter
7 0350 process since December 2011. The NRC invoked this process which
8 provides increased oversight due to significant performance problems and a
9 significant operational event involving a fire that occurred in the safety-related
10 electrical switch-gear at the plant. The reactor at Fort Calhoun cannot restart
11 until approved by the NRC. Most Commission meetings that we have here focus
12 on policy issues. However, a meeting like this that focuses on the operational
13 safety of one licensee is vitally important to the NRC's mission of protecting
14 public health and safety.

15 I look forward to hearing today about the progress being made at
16 Fort Calhoun and the challenges that still remain. Would any of my fellow
17 Commissioners like to make any opening remarks? No? Okay. Then I think that
18 brings us to the external panel presentations. And to get us started this morning,
19 I'm going to turn things over to Gary Gates, who is president and chief executive
20 officer of the Omaha Public Power District.

21 GARY GATES: Good morning, Chairman and Commissioners. If I
22 could have Slide 1, please? Thank you for allowing us to meet with you today.
23 My name is Gary Gates; I'm the President and CEO of Omaha Public Power
24 District. It was February 22nd last year when we sat down in front of you and
25 shared that I was clearly not satisfied with where we were. I gave you my

1 commitment and the commitment of the entire Omaha Public Power District that
2 we would identify, analyze, and resolve our performance issues. Today, we will
3 discuss significant progress we have made to recover Fort Calhoun Station. Our
4 remaining work is well-understood; we have the right leaders in place to do that
5 work. While we are proceeding with urgency, we are not after short-term fixes.
6 We are taking the time necessary to put Fort Calhoun back on track to
7 excellence and to sustain it in the long-haul. We are coordinating very closely
8 with your staff. We will restart Fort Calhoun Station when we are satisfied
9 ourselves, and demonstrated to the NRC, that the plant is ready and that we can
10 sustain the improvements we have made. Slide 2, please.

11 We are here today to update you on the significant actions we have
12 taken and the significant progress we've made since our last meeting. Following
13 my introductory remarks, we'll address our operating services agreement with
14 Exelon Generation; our new vision, mission, and values that guide our actions
15 and decisions; improvements we have made to our site organization; progress
16 we have made on our restart checklist items; and our strengthened and
17 independent corporate governance and oversight.

18 We also look forward to answering your questions. Here at the
19 table with me today are Lou Cortopassi, our chief nuclear officer and site vice-
20 president; Mike Prospero, our plant manager; Kerry Ihnen, our manager of
21 nuclear oversight; and Susan Landahl. Susan is the Exelon Generation senior
22 vice-president for new development. Mo Doghman, our vice president for energy
23 delivery and chief compliance officer is also here today.

24 Supporting these exceptional executives are the men and women
25 of OPPD, who are dedicated professionals. OPPD is committed to providing the

1 right resources to Fort Calhoun. We will return the plant to safe and efficient
2 operation and we will put the plant on a path to excellence. Slide 3, please.

3 Our performance was clearly unacceptable to all of us at OPPD, as
4 it was to you. We have defined our challenges clearly; we've implemented
5 comprehensive discovery activities to fully identify the breadth and depth and the
6 causes of our performance deficiencies. OPPD workers and outside experts
7 have completed thousands of hours of root-cause analysis. Where necessary,
8 we expanded our scope to look broader and deeper, to ensure that we go to the
9 root of the issues. When appropriate, independent teams of experts were
10 brought in to review our work and provide stronger reassurance that we got it
11 right and that we are implementing the necessary corrective actions. Slide 4,
12 please.

13 We are accountable to you, to ourselves, and, most importantly, to
14 our customers and neighbors. We will not restart Fort Calhoun until we are
15 convinced that the plant is ready for safe and efficient operation, and that our
16 continued improvement actions are sustainable for the long-haul. I'm here to
17 personally tell you that we're on the right path, and we are doing this in a
18 thorough, professional, and transparent way. While you will be hearing about the
19 details of our significant progress throughout this presentation, I want to take time
20 to highlight two major initiatives that I feel are game changers in this effort. Slide
21 5, please.

22 Our most notable initiative is our 20 year operating services
23 agreement with Exelon Generation. We believe that Exelon Generation
24 represents our ideal partner, and will effectively mitigate the single unit
25 challenges faced by Fort Calhoun Station. Exelon Generation provides fleet

1 capabilities, experience and support, organizational breadth and technical depth,
2 and bench strength for us. Exelon is the single largest donor and operator of
3 nuclear plants in the United States, with a capacity equivalent to almost 38 Fort
4 Calhouns.

5 Exelon has thousands of nuclear employees, who also have an
6 existing relationship with Exelon. They have been assisting in our recovery
7 activities since last February. And, most importantly to us, Exelon has a long-
8 term demonstrated history of exceptional nuclear operations. I'm pleased to
9 have Susan here today with us to share how Fort Calhoun Station is being
10 integrated into the Exelon fleet. As you know, OPPD remains the owner of Fort
11 Calhoun and the license holder for the plant; we retain the ultimate accountability
12 for the safe operation of Fort Calhoun. Exelon will have the responsibility for the
13 day-to-day operations of the plant. Slide 6, please.

14 Our second major initiative deals with having a strong,
15 independent, and intrusive corporate oversight of Fort Calhoun Station. This is
16 the one key to assuring that type of performance problem does not go
17 uncorrected in the future. The Nuclear Regulatory Commission will always serve
18 that role from a regulatory and a public perspective, and we appreciate your
19 work, but we feel strongly that we need to build additional independent, rigorous
20 oversight into our own organization. Having the questioning attitude from both
21 inside our nuclear business unit, as well as from the rest of our company, will
22 serve us well. Slide 7, please.

23 So let's get started with our progress report. Susan will go into
24 detail on the operating services agreement with Exelon, what it means for a
25 restart, and how it will support sustained performance at Fort Calhoun. Next, Lou

1 will share specifics on how we are bringing Fort Calhoun's vision, mission, and
2 values to life. Progress on certain restart activities will be summarized by Lou
3 and Mike. And, finally, I will share with you how we have strengthened our
4 corporate governance and oversight, and Kerry will give you specific insights on
5 the outcomes of these changes. So now let me turn the presentation over to
6 Susan Landahl.

7 SUSAN LANDAHL: Thank you, Gary. Good morning, Chairman
8 and Commissioners. My name is Susan Landahl, and I am Exelon senior vice-
9 president of New Development. In this role, I'm the chief executive responsible
10 for the integration of Fort Calhoun Station into the Exelon fleet. I have
11 approximately 30 years of experience in the nuclear industry, and with Exelon I
12 have held several senior positions, including chief operating officer, senior vice-
13 president for Midwest operations, and site vice-president at the La Salle Station.
14 Slide 8, please.

15 The operating services agreement forms the foundation for
16 achieving and sustaining excellence at Fort Calhoun Station. I will elaborate on
17 three elements of this agreement. First, we placed 11 Exelon leaders in key
18 positions at Fort Calhoun. These leaders have not only demonstrated success in
19 their specific areas of expertise, but they fully embrace the accountability culture
20 that is a key element of the success of the Exelon nuclear management model.

21 In addition to the on-site personnel, we have established an
22 integration team reporting to me through the vice-president of integration
23 projects. This is the second key element of the agreement. The integration team
24 includes Exelon experts who are providing on-site -- ongoing site support and
25 transition planning organized around more than 22 different functional areas,

1 everything from operations and engineering to human resources and information
2 technology.

3 The third element of the agreement addresses the long-term
4 sustainability of Fort Calhoun through the implementation of the proven Exelon
5 nuclear management model, and full integration into our fleet. The management
6 model is developed around the strategic focus areas, beliefs, and behaviors that
7 are essential for a strong nuclear program. It includes process management
8 controls comprised of several hundred policies, programs, procedures, and
9 processes. And these are continually updated to ensure that they comply with
10 industry best practices.

11 Also key to the model are the performance management and
12 results assessment tools that ensure accountability to achieve the ultimate result,
13 which is consistently strong performance with a strong nuclear safety culture as
14 its foundation. We recognize the magnitude of this task. Full integration into the
15 Exelon fleet will be conducted in a detailed, rigorous, and systematic manner
16 over several months, with appropriate focus on change management.

17 Our near-term focus is in supporting Fort Calhoun in completing the
18 necessary actions required to prepare the unit for safe restart. Our long-term
19 focus is on continuous improvement and achieving sustained excellence. And
20 while the operating agreement has only been in place for four months, things are
21 already different at Fort Calhoun. Next slide, please.

22 As you heard earlier, Lou Cortopassi is in place as the chief nuclear
23 officer and site vice-president, leading the Fort Calhoun organization. Lou is a
24 dynamic and inclusive leader, who has integrated the new Exelon leaders with
25 the OPPD managers into his blended senior leadership team. And you'll hear

1 more about that from Lou in a few minutes. Our fleet experts are actively
2 supporting Fort Calhoun to assure error free performance of critical evolutions,
3 such as radiography and radiological diving.

4 Other examples of fleet support include using engineering expertise
5 to assist in resolving equipment issues, and participation in site self-
6 assessments. In addition, Fort Calhoun managers have already taken
7 advantage of fleet opportunities to attend technical training, and to participate in
8 leadership forums with their Exelon peers. Next, the long-term integration plan
9 has been established and is being implemented.

10 This plan provides the necessary structure to ensure that the
11 management model, which is the key to sustained performance, is successfully
12 implemented at Fort Calhoun. And lastly on this slide, formal accountability
13 meetings with senior executives from both OPPD and Exelon are held monthly.
14 These are full day meetings held at the plant, and include time spent in the plant
15 in addition to reviewing performance and progress. These types of forums for
16 corporate executive challenge are a key element of the Exelon management
17 model. At this point, I would like to turn the presentation over to Lou Cortopassi.

18 LOU CORTOPASSI: Thank you, Susan. Good morning, Chairman
19 and Commissioners. Slide 10, please. My name is Lou Cortopassi; I'm the chief
20 nuclear officer at OPPD and the site vice-president at Fort Calhoun Station. I
21 have 29 years of nuclear experience. I was the vice-president Exelon mid-
22 Atlantic operations, and have held senior leadership roles at four different nuclear
23 plants, including plant manager at one plant during a significant performance
24 recovery. I was also a licensed reactor operator and senior reactor operator. I've
25 been at Fort Calhoun Station since January in a senior recovery role, and I

1 became site vice-president in August and chief nuclear officer in September.

2 To start with, at Fort Calhoun we've established a new vision, a
3 new mission, and a new set of values. First, our vision, what we describe to our
4 staff, is our destination: the safe and efficient restart of Fort Calhoun Station, and
5 achievement of sustained excellence. And, of course, our focus right now is on
6 that first half of that vision. We will return Fort Calhoun to safe power operations.
7 However, an important part of that milestone is the second part of our vision. As
8 Susan mentioned, we've established a foundation for continuous improvement
9 and have made significant progress.

10 The drive to restart the plant is supported on the short-term by the
11 operating services agreement, and its implementation plan. On the longer term,
12 our sustained improvement will be facilitated through integration into the Exelon
13 fleet, and through implementation of the Exelon nuclear management model. On
14 to our mission, it's what we strive to do every day: safe, efficient -- excuse me --
15 safe, event-free, cost-effective nuclear production of electricity. We describe this
16 to our staff as our destination. It clearly captures our top two priorities of safety
17 and event-free human performance, and I can assure you that we're
18 incorporating these into the fabric of our culture.

19 Our other two priorities are to fix the plant and to effectively
20 implement the corrective action program to find and fix our own problems, and to
21 learn from others experiences and best practices. Slide 11, please.

22 We've also clearly communicated to our staff our five core values.
23 These values guide our activities and decisions. I've already mentioned safety.
24 I'll expand that here to include nuclear, industrial, radiological, and environmental
25 safety; safety remains our prime value. But I'll also briefly describe our other

1 values, starting with alignment, which begins with our senior leadership team and
2 expands across the site through our Outage Control Center leaders and our
3 supervisors in the field, with a strong focus on face-to-face communications and
4 feedback on performance.

5 On to accountability where we've realigned the leadership team and
6 have recently completed training cycle to this core value. It is a positive
7 leadership trait with examples of what excellence looks like, with respect to
8 accountability. Our bias for action, where issues are appropriately elevated and
9 the right athletes are assigned to drive issue resolution; that ties nicely to our
10 priority of fixing the plant, as well as the corrective action program.

11 And all of this is anchored with a strong nuclear safety culture. We
12 do understand the special and unique characteristics of nuclear power, and the
13 importance and vitality of maintaining a strong nuclear safety culture. This
14 applies to every employee of the organization; it is our first value adopted and
15 never abandoned. These values and behaviors they drive are critical to the
16 fulfillment of our vision and mission. Slide 12, please.

17 As Susan mentioned, we've blended the Exelon leaders with the
18 existing experienced leaders at Fort Calhoun Station, to perform a -- to form a
19 strong and balanced team that is capable of returning Fort Calhoun Station to
20 excellence. I was specifically involved and chose these leaders, based on their
21 proven successful experience, and their core values in alignment with Fort
22 Calhoun values. Each senior leader, on average, has 28 years of experience,
23 with experience at multiple nuclear sites. And we verify and have challenged,
24 and continue to push alignment with our vision and mission. We assure that
25 through our daily and nightly outage meetings, our end of the day alignment and

1 turnover meetings, and other face-to-face interactions with the senior leadership
2 team.

3 I and the senior team also meet on Monday morning with station
4 supervisors and managers, to ensure alignment through the organization on
5 values and expectations, and on priorities and goals for the week. At these
6 meetings we will also highlight one of the INPO safety culture principles and
7 bring it to life through examples and discussion; we discuss successes and
8 opportunities from the past week, we tie it to our station priorities, we look at our
9 values, standards, behaviors, and also, most importantly, the leadership behind
10 that.

11 We also discuss major recovery accomplishments, activities, and
12 upcoming milestones. This information is provided to the supervisors and
13 managers in a slide presentation, where they, in turn, align their crews or their
14 specific departments with the same information on Tuesday mornings. The team
15 is engaged in holding Fort Calhoun accountable to our expectations. While this
16 accountability throughout the organization is palpable, it's not always
17 comfortable, but it's always necessary for us to achieve our best. Slide 13,
18 please.

19 So what does that mean today regarding performance at Fort
20 Calhoun Station? As mentioned, senior leadership team has been in place for
21 about four months. We now have an integrated schedule that describes our
22 known outage work with the right level of detail. We've established an outage
23 control center, where operators, engineers, and maintenance staff work together
24 facilitating the work in the station. With the right measurement tools in place, the
25 right work is being done correctly and at the right time. And we're reinforcing the

1 values and behaviors, as I mentioned before, to ensure safety and quality, and
2 that the work through timely in-field observations and feedback, and continue to
3 use that face-to-face interaction with our employees, reinforcing behaviors. Slide
4 14, please.

5 I'm going to transition to discussing progress we've made in the
6 following areas: organizational effectiveness, safety culture, and problem
7 identification and resolution. This really does set the foundation for all of the
8 actions and improvements we're making at Fort Calhoun Station. Our focus now
9 is on driving and measuring our performance and instilling behavior change in
10 our people.

11 Through our root-cause analysis, we identified three overarching
12 issues that drove performance decline at Fort Calhoun Station. First, we did not
13 have a sufficiently robust structure in place to ensure effective governance and
14 oversight and we did not establish the right expectations for leadership
15 accountability. Second, our nuclear safety culture needed improvement across
16 several areas. We were sending mixed messages to our staff on what we
17 expected. Safety was not clearly articulated as our prime value and
18 responsibility. In addition, our staff was sometimes reluctant to bring up issues
19 based on the reaction that they received from leadership.

20 And, finally, with these flaws in our foundation, the corrective action
21 program did not effectively or adequately assure that we're finding and fixing our
22 own problems and learning from our experiences, and the experiences of others.
23 Bottom line is we did not have the fundamental elements in place to assure clear,
24 consistent expectations that our staff be always present, engaged in safety, and
25 have a bias for the right action at the right time to maintain excellence. Slide 15,

1 please.

2 So what does that mean today regarding performance at Fort
3 Calhoun Station? As I mentioned, we clearly established and reinforced our new
4 safety-focus vision, mission, and values. This does come from the top and is
5 being inculcated throughout the organization. We've established clear
6 expectations for our leaders and are holding them accountable to ensure their
7 staff has the proper focus. We've implemented an improved corrective action
8 program. Site senior leaders conduct daily meetings to ensure the corrective
9 action program is now functioning effectively. We placed corrective action
10 program coordinators in key departments to ensure the program was working
11 effectively and efficiently and to reinforce behaviors and expectations.

12 We have effective program -- excuse me -- performance indicators
13 on the health of the corrective action program. They reflect industry best
14 indicators, but not yet industry best performance. I hold facilitated 2Cs meetings.
15 The "C" stands for compliments and concerns, where I have small groups of
16 employees with a facilitated manner providing me feedback on things that are
17 going well at the station, as well as areas that we need to continue to improve on.

18 We've reinvigorated our safety culture monitoring panel, chaired by
19 one of my direct reports. That panel now meets essentially weekly, looking at
20 any emerging issues and to address anything with respects to an emergent
21 safety culture issue.

22 We have a monthly pulse survey where our workers are asked a
23 series of questions, and they are providing their feedback and insight on issues
24 affecting our safety culture, as well as successes in the organization. These
25 surveys feed station performance indicators on the health of our safety culture.

1 Again, they reflect industry best indicators, but not yet industry best performance.
2 These are some of the tools that provide us a solid foundation for understanding
3 the health of the organization and understanding necessary next steps. Slide 16,
4 please.

5 We've made significant progress completing the activities
6 necessary for a safe and efficient restart of Fort Calhoun Station. The recovery
7 of Fort Calhoun Station is described in our integrated performance improvement
8 plan; we call it our IPIP. Revision for the IPIP was docketed on October 31st,
9 2012. That revision included updates reflecting the implementation of our
10 operating services agreement and a new section addressing our post-restart plan
11 for sustained improvement. The IPIP also includes a detailed restart checklist
12 implementation strategy that segments each restart checklist item into four
13 activities: scoping, discovery, analysis, and implementation. The strategy also
14 includes scope expansion criteria and checklist item closure criteria. We have
15 made progress on each and every checklist item.

16 All of the scoping activities are complete. We've made significant
17 progress on the discovery and analysis for all items, and are over 85 percent fully
18 complete. And we have made progress on implementing the necessary activities
19 to prepare for restart. I'd now like to turn the presentation over to Mike Prospero,
20 our plant manager, to go into more depth and detail on several of our restart
21 activities.

22 MIKE PROSPERO: Thank you, Lou. Good morning, Chairman
23 and Commissioners. Slide 17, please.

24 My name is Mike Prospero and I became the plant manager at Fort
25 Calhoun Station in February 2012. I have nearly 30 years of experience,

1 including senior leaderships at five different nuclear power plants. Most recently,
2 I was a plant manager at the Exelon Quad Cities Nuclear Power Station. I've
3 held other leadership positions in outage, nuclear oversight, and operations.
4 Finally, I was a licensed senior operator.

5 When I arrived on-site, I began establishing and reinforcing the
6 right expectations at Fort Calhoun Station. In the nuclear industry, we have
7 found a close correlation between successful nuclear power plants that operate
8 with significant safety margin and those leader- and worker-behaviors that result
9 in a workplace without injuries and with few human performance concerns.

10 Our expectations are clear and I want to emphasize that these are
11 continuously reinforced expectations. We expect to be rigorously focused on
12 planning, performing, and monitoring, and we stop and seek help when we have
13 unexpected situations arise.

14 I, my managers, and supervisors, ensure that our staff works in a
15 way to minimize the likelihood of injuries. We have made significant progress in
16 reducing worker injuries. This chart depicts the overall worker improvement and
17 worker safety at Fort Calhoun Station. We attribute this trend to the renewed
18 leader and worker expectations. These behaviors that have significantly reduced
19 worker injuries are the same behaviors that result in top flight nuclear safety at an
20 operating reactor.

21 I would like to share an example of how we respond in the
22 workplace to injuries. A maintenance worker was working on a new storage
23 cabinet and bruised his forehead because of a hinge that had broken during
24 shipment. Our reaction to this event was different than the reaction has been in
25 the past at the Fort Calhoun organization. The worker, his supervisor, and I

1 would all meet in my office and discuss the matter. Then the three of us walk out
2 to the maintenance shop, examine the cabinet, and reenact the event, and make
3 sure that we understand what happened. We took action to examine the other
4 cabinets to make sure that the problem would not reoccur. Our bias was for
5 action, and all the maintenance workers in the shop who saw our behaviors in
6 addressing would be perceived as a small event, sent a message and reinforced
7 that we will respond to small issues to make sure that we prevent the more
8 significant issues from ever occurring. Slide 18, please.

9 We also monitor human performance using industry standard
10 thresholds called "Station Clock Resets" and "Department Clock Resets." We
11 have significantly reduced human performance issues. This chart depicts the
12 overall improvement in human performance at Fort Calhoun Station. Those
13 same leader- and worker-behaviors that reduced injuries have also reduced
14 human performance errors. We performed hundreds of activities correctly each
15 week, but we learn when things do not go right.

16 I would like to describe a response to a recent department clock
17 reset. After replacing control valve solenoid an electrician re-landed wires in a
18 junction box one log off -- one log off from where they were supposed to be. This
19 error was discovered during post-maintenance testing. The qualifications of the
20 craft-worker and the quality control inspector were suspended while an
21 investigation was performed. The electrician had used a poor work practice for
22 making the log when the lead was lifted.

23 Further review disclosed that this was a common work practice
24 among electricians. In addition, the QC inspector fell into the same human
25 performance trap as the electrician. We took action to improve these work

1 practices and to ensure that the QC personnel perform valid, independent
2 confirmation of quality work. This level of engagement has sent a clear message
3 to my staff on preventing human performance error, and reinforcing expected
4 behaviors. Slide 19, please.

5 I would now like to discuss, briefly, the status of several of our
6 restart items. In June 2011, Fort Calhoun experienced electrical fault and fire in
7 a 480 volt switchgear. This event revealed several shortcomings in our
8 performance. We restored and improved the 480 volt bus and switchgear. It is
9 now available to safely support the plant today. We utilized independent industry
10 experts to work alongside OPPD experts to complete a comprehensive root-
11 cause analysis. We have improved our electrical distribution hardware, our
12 engineering processes, and our procedures. Our electrical bus is available
13 today, and the final testing that support operability during heat up and restart is in
14 progress. Slide 20, please.

15 To ensure that the plant is fully restored from the effects of the
16 2011 flood, we developed a flood recovery plan as part of our IPIP. The flooding
17 recovery plan is comprehensive and has hundreds of actions. All the actions
18 necessary to be flood-ready for 2012 flooding season have been completed. A
19 few actions remain for restart. The NRC has inspected and closed multiple flood
20 recovery items. We have made significant progress on this area. Slide 21,
21 please.

22 One of our concerns from the 2011 flood was the impact of the
23 flood waters on the strength of the soils beneath our safety-related structures.
24 We've scoped this issue and performed comprehensive discovery and analysis
25 activities involving extensive soil borings, testing, and analysis. The work

1 involved two separate engineering firms. Due to the unique complexity of this
2 type of work, we opted to hire a third, independent engineering firm to provide an
3 assessment on the adequacy of the work of the other two firms. The item is
4 complete, and the conclusion is that there are no structural concerns affecting
5 the safety of Fort Calhoun Station. We are currently finalizing the closure book to
6 support NRC inspection of this item. Slide 22 please.

7 During the course of the extensive discovery actions at Fort
8 Calhoun Station, our staff identified two significant issues that must be addressed
9 before a restart. The first issue concerns a number of electrical penetrations
10 through the containment wall that include Teflon seals and wires that could
11 degrade in a post-accident environment. Some of the penetrations are unused,
12 those are being kept. Some of the penetrations will be replaced with tested and
13 qualified components. For the remainder of the penetrations, over 300, we are
14 pursuing several options in parallel.

15 One path is an ongoing analysis to determine whether these
16 penetrations remain operable. A second path is a modification we have
17 designed to address the issue. We have begun the environmental qualification
18 testing process for the modified penetration assembly. In addition, we are
19 procuring replacement feed through. Slide 23 please.

20 Another item by our staff concerns problems with some of the
21 original design drawings and design calculation for the columns and beams
22 inside containment. This does not affect the containment shell, it is robust. Nor
23 does it affect the sub-compartments inside containment, those are also robust.
24 However, it does affect the internal beams and columns supporting the floors and
25 equipment outside the sub-compartments but inside containment. The design

1 work has been completed -- the design work was completed well before the
2 availability of computer based, three-dimensional modeling tools in use today.
3 We performed preliminary calculations and analysis to ensure that those
4 structure elements would meet the safety function for the current plant condition.

5 The containment internal structure is functional today. It appeared
6 from those preliminary calculations that some elements may not have as much
7 design margin as they should. We will adjust this before restart.

8 We have suspended work that could have impact on the
9 containment building internal structure. We initiated a full reanalysis of the
10 containment internal and structure design. Those models have been built and
11 validated including independent engineering review. As a modification is
12 proposed, the model is updated and rerun and then impact of the modification on
13 the rest of the structure is determined. By repeating the process the
14 modifications necessary to ensure the best solution for integrated structure are
15 determined.

16 We are now completing operability determinations and we recently
17 met with the NRC staff here in headquarters to discuss the issue. Any
18 modifications that are necessary for operability will be completed prior to restart.
19 I gave you a snapshot of certain discovery and recovery activities we have
20 underway at Fort Calhoun Station. I will now like to turn the presentation to Lou.

21 LOU CORTOPASSI: Thank you, Mike. Slide 24 please. As we
22 discussed earlier, we have a detailed restart checklist implementation strategy in
23 our IPIP or integrated performance improvement plan. It is guiding our recovery
24 and restart activities. In addition, the NRC oversight panel has issued its restart
25 checklist basis document that provides clear and predictable guidance for their

1 actions to confirm that we've adequately addressed the checklist items.

2 For each checklist item, OPPD staff and my management prepares
3 a closure book that clearly describes the scoping, discovery, and analysis for
4 each item and implementation of the corrective actions to prevent recurrence.
5 That closure documentation then goes through three levels of review before it's
6 presented to me for approval. First, the technical review board comprised of
7 experts reviews the material for technical adequacy. Then a challenge board of
8 managers and senior leaders evaluates whether the staff is ready for inspection
9 for that item. And finally, our independent nuclear oversight reviews the
10 adequacy of closure and readiness for inspection.

11 Only when all three of these reviews are successfully completed,
12 will I consider an item ready for NRC inspection. I can assure you that none of
13 these reviews are rubber stamps. Some books have been approved but also
14 some have been sent back for additional actions. I will not present an item as
15 satisfactory for restart until we are convinced that we've done our work correctly.
16 Slide 25 please.

17 It's also my decision on when the plant is ready for restart. I will
18 ensure all checklist items are satisfactorily resolved as I've described. I will also
19 confirm that our organization has adequately resolved each item in a
20 confirmatory action letter. We're also reviewing key systems, programs, and
21 departments with Exelon fleet support to identify any gaps for safe and efficient
22 restart and those gaps will also be addressed.

23 During heat up of the plant, we will perform around the clock
24 assessments using OPPD and independent experts and ensure that our
25 operators and shift crews are functioning safely and effectively. This will include

1 all the support organizations for safe operations such as maintenance,
2 engineering, radiation protection, work control. We'll run the organization through
3 its paces and make sure we're ready.

4 Finally before I submit the Fort Calhoun Station restart report to the
5 NRC, we will perform independent reviews of our recovery actions by our nuclear
6 oversight department, our corporate governance and oversight committee, and
7 our safety audit and review committee. Only when we are convinced will we
8 determine that the plant is ready. I'd now like to turn the presentation over to
9 Gary.

10 GARY GATES: Thank you, Susan, Lou, and Mike. I have made
11 changes in our corporate governance and oversight for Fort Calhoun Station to
12 ensure that the subtle indicators of protractive performance decline do not go
13 unaddressed in the future. We stay on a path of continuous improvement in the
14 future. During our organizational effectiveness assessment we identified areas
15 to improve our corporate oversight at Fort Calhoun Station. We've taken clear
16 actions to improve our governance and oversight at Fort Calhoun.

17 First we established a strategic plan which incorporates Fort
18 Calhoun Station and corporate level procedures defining expectations, roles, and
19 responsibilities. We've also improved the expertise and effectiveness of our
20 safety audit and review committee. We call it a SARC, it's like an NSRB in other
21 plants. This is an independent assessment function required by our license. The
22 SARC currently has one retired NRC regional manager and four highly
23 experienced outside nuclear industry senior executives, one that was recently
24 assigned.

25 In addition to these experts, SARC membership has been

1 supplemented by several new members. Mo Doghman is one of the new
2 members on the SARC. These actions will improve SARC assessments and
3 actions we are taking to improve our safety culture and enhance our corrective
4 action program. We will improve the effectiveness of SARC.

5 Now I'd like to discuss our new corporate nuclear governance and
6 oversight committee. Mo chairs this committee. This committee meets monthly
7 on-site and receives input from station leaders, station performance metrics, our
8 SARC, and our nuclear oversight department. This provides another resource
9 for frequent, independent, oversight of Fort Calhoun. They report their insight
10 and results to me and to our elected board of directors. The nuclear oversight
11 department is also new at OPPD and reports directly to Mo. The department
12 reign reflects a new and broader focus for nuclear audits assessments and
13 oversight.

14 Nuclear oversight includes the traditional functions of quality
15 assurance and quality control, but it also includes new accountabilities for
16 oversight, observation, and audit beyond the minimum regulatory requirements
17 with a focus on behaviors that lead to, and sustain, excellence in our nuclear
18 operations. Nuclear oversight also includes our expanded and confidential
19 employee concerns program. Nuclear oversight is led by Kerry Ihnen. Kerry will
20 share several outcomes of this more intrusive, independent oversight of Fort
21 Calhoun Station performance. Kerry?

22 KERRY IHNEN: Thank you, Gary. My name is Kerry Ihnen. I am
23 the nuclear oversight manager at OPPD. I am completely independent of the
24 nuclear operations chain of command and I report to Mr. Doghman in the
25 corporate office. I have held this position for four months. I have 27 years of

1 nuclear experience in engineering and operations and I've held a senior reactor
2 operator's license. I also worked seven years for the Nuclear Regulatory
3 Commission as an operating license candidate examiner and as a resident
4 inspector. Before coming to Fort Calhoun, I was the nuclear oversight manager
5 for five years at an operating Exelon Nuclear plant. Slide 27 please.

6 As Gary indicated, nuclear oversight at Fort Calhoun today is
7 different. The Exelon nuclear management model includes strong accountability
8 and oversight checks and balances. The nuclear oversight component of the
9 model is one of the early aspects of the model that we've implemented to provide
10 enhanced assurance that OPPD has well-structured, independent, and intrusive
11 oversight of Fort Calhoun Station performance. My team of 20 individuals
12 performs inspections, audits, and assessments of station activities. Our role is to
13 challenge the station behaviors, their adherence to standards and expectations,
14 identify improvements needed and any gaps to excellence.

15 Nuclear oversight staff members are in the field providing an
16 independent set of eyes and ears observing daily performance and reinforcing
17 behaviors. As an example, during recent work associated with the repairs to the
18 voltage regulator for the emergency diesel generator, my team identified quality
19 issues with the soldering that was being performed and also identified gaps in the
20 processes used at Fort Calhoun. Those soldering processes were not as robust
21 as those used in the Exelon fleet. Based on the issues we identified, the station
22 was required to rework the solder joints and has upgraded the processes used
23 for soldering including problematic changes and additional training for the
24 technicians that perform the soldering.

25 This is just one example of nuclear oversight being intrusive, in the

1 plant, challenging the status quo, and driving improvements and standards.
2 Nuclear oversight is having an impact on accountability for, and reinforcing, the
3 expected values and behaviors. We've also improved the effectiveness of our
4 employee concerns program which now reports directly to the corporate office.
5 We've increased from one to three the number of fully qualified individuals to
6 accept employee concerns. Employee concerns program is just one of many
7 avenues the employees have to raise concerns. We have experienced an
8 increased trust and confidence in our employee concerns program.

9 In 2012 we received more contracts to our employee concerns
10 program and we saw a significant reduction in the number of allegations being
11 reported to the NRC, both of which are key indicators that ECP is being viewed
12 more favorably by our employees.

13 Finally, we have completed training for Fort Calhoun Station
14 supervisors, managers, and executives in establishing and maintaining a safety-
15 conscious work environment. Similar training's been provided to all Fort Calhoun
16 Station personnel. We've made significant progress. I'd now like to return the
17 presentation to Gary for closing remarks.

18 GARY GATES: Thank you, Kerry. Slide 28 please. Chairman and
19 Commissioners, thank you for giving us this opportunity to speak to you today.
20 As Lou and Mike have said, we focus each and every day on safety and it will
21 remain that way. We are serious about the safe and efficient restart of Fort
22 Calhoun Station and we will restart Fort Calhoun Station. We understand what
23 we need to do. We have the right leadership in place to get it done.

24 We, at Fort Calhoun Station, have demonstrated excellent
25 performance in the past. We are serious about ensuring the fundamentals we

1 put in place will continue to drive our performance improvement after restart and
2 we will return Fort Calhoun to operational excellence. I know what the Fort
3 Calhoun employees are capable of. They yearn to be the best. The plant is safe
4 today and you have my assurance that we will not restart Fort Calhoun Station
5 until we have demonstrated to ourselves, and to you, that we have in place the
6 right tools and mindset for continued improvement after restart.

7 As you can see, we've accomplished much and we are well on our
8 way. We now look forward to answering your questions.

9 CHAIRMAN MACFARLANE: Thank you very much. Thank you
10 very much for the presentation. We will now have questions from the
11 Commission. And we will start off with Commissioner Magwood.

12 COMMISSIONER MAGWOOD: Thank you, Chairman. I thank you
13 for this morning's presentation; it was very detailed, very specific, and very good
14 so I appreciate that. I also wanted to appreciate -- express my appreciation for
15 OPPD's interaction with the agency and the Commission, in particular, over the
16 last year or so. Gary, you've been here quite a bit and you've been very open,
17 very honest about what you're going through at the site. And I think that
18 openness has been very helpful to help me understand, you know, the situation,
19 to be able to evaluate the staff's work.

20 In an earlier conversation, and I was listening Lou's discussion
21 about sort of what went wrong. That's sort of the specifics of what went wrong.
22 But I remember asking you some time ago what you thought went wrong, where
23 Fort Calhoun took that left turn that led to lower performance. And I thought that
24 perhaps you'd like to give us your thoughts on that for the record. So I think
25 there are lessons learned in there for others.

1 GARY GATES: Thank you, Commissioner. The past performance
2 of Fort Calhoun -- and I indicated this in our February 26th meeting too -- the
3 overall performance indicators for Fort Calhoun were good on the bigger scale.
4 But we had subtle issues that were developing over time. They resulted from the
5 fact that we didn't have consistent application of our leadership principles and we
6 weren't having alignment completely through the organization for those. That
7 resulted in a lack of visibility of these subtler -- more subtle issues for us and not
8 available for us to react to as a leadership team.

9 On the flip side of that, what we've developed now and what you
10 heard about this morning is the processes, particularly the Exelon model, drive
11 that kind of visibility, drive that kind of alignment and drive consistent practices.
12 So from my view, it was the alignment and lack of consistent application of those,
13 the fix that we have in place with the model and the overall procedures at the
14 plant are driving the correction of that.

15 COMMISSIONER MAGWOOD: Appreciate that. You mentioned
16 the operating contract with Exelon. And one question that I have about that is
17 can you explain exactly where the points of demarcation are in decision-making, I
18 mean, at what point does OPPD assert itself as the owner? Can you give us
19 your thoughts on how that's going to work?

20 GARY GATES: Sure, these are contractual elements as well, but
21 the OPPD is ultimately responsible for the plant, for the safety of the plant, the
22 operation of that plant. We have chosen to use Exelon as our day-to-day
23 operator. But I, personally, approve the personnel that are coming to the site to
24 be involved in the station. I also have control on when they might leave so that it
25 can't be a short-term effort if somebody wants to lure Mike and it's not

1 appropriate for OPPD at this time, I control that feature as well.

2 We do provide the budget for the plant and Exelon manages to that
3 budget so there's a financial control there, which is not insignificant when you're
4 managing a unit like this. But key to this is the complete alignment between
5 OPPD and the Exelon leadership. You won't see a difference in what our values
6 are, how we manage, and how we treat safety issues. And when we believe
7 we're ready to restart the unit, or when we're operating this unit five years from
8 now and we need to make a decision of a repair to that unit, there will be a total
9 alignment, it's just the way the contract is set up. But it's also a clear
10 demarcation in day-to-day operations that Lou's responsible for. Lou has the
11 advantage, I'll say the advantage of having two bosses, both of which are sitting
12 here. And he's doing quite well at that. And the reason is that Susan and I are
13 completely aligned. And Susan, you might have some other comments on that.

14 SUSAN LANDAHL: Speaking from Exelon's perspective,
15 Commissioner, I agree with everything Gary just said. We are very aligned, we
16 understand the mission, we have the same expectations of Lou and his team.
17 And we actually haven't seen any conflicts at all in this arrangement and I think
18 the continued openness, the fact that, you know, we're involved together in these
19 management review meetings and phone calls, you know, challenge meetings to
20 address schedule, human performance, whatever, we're extremely aligned.

21 COMMISSIONER MAGWOOD: Appreciate that, and Susan, since
22 you're talking about this, you know, I think there's been some past experience
23 with operating arrangements a little different from this where the operators, the
24 organizations responsible for operating the plants, would have like to have spent
25 perhaps more resources on various issues and found some difficulty in getting

1 the owners to agree to part with those resources. And I appreciate that you're in
2 alignment today but as I think you've indicated this is a long-term arrangement.
3 Ten years from now, if the operators want to, you know, spend more money to
4 enhance safety in some area what's your assurance that you'll be able to get that
5 to happen? How does the public and how do we know that those conversations
6 are taking place where the operator says we need to spend \$1,000,000 and the
7 owner says, "Absolutely not."

8 SUSAN LANDAHL: Well, part of the strategy, if I can speak, at
9 least in part for OPPD about bringing Exelon in was this long-term view of
10 continued excellence. And, you know, when you look at the elements of the
11 contract, it is not just about running the plant but it is about returning it to
12 excellence and staying there. And so, you know, given that that's its fundamental
13 goal, if there is a need to do something from a safety perspective, from a
14 production perspective, from a people perspective, you know, clearly OPPD is
15 committed to having that vision of excellence and I don't see a conflict in the
16 future because that is the foundation of the contract to begin with. And it's
17 actually very clearly laid out in that contract.

18 GARY GATES: If I could add, the focus for the OPPD senior team
19 will be maintained on Fort Calhoun and the reason I can assure you of that is
20 their performance now is an integral part of that -- their appraisal. Every vice
21 president that works for me right now has specific nuclear responsibilities. In
22 addition to Mo Doghman, that you've heard about today, our vice president for
23 our -- essentially for our fossil generation is the liaison to Fort Calhoun, so he's
24 up there frequently, every week. Our CFO is responsible for the safe operation
25 of the plant and part of that is reflected in his performance appraisal. So it's not

1 going to be at any advantage of him to try and cut any corners because he needs
2 to have that as well. Our corporate communications is actually on the site now
3 helping us communicate internally and externally going forward, and our HR and
4 procurements services are tied right to Fort Calhoun as well. So the hearts and
5 minds of the whole senior team are part of Fort Calhoun by definition and by
6 commitment. It's a great team. I don't anticipate that there will be any problem in
7 the future. But there are contractual and links that will prevent that from
8 happening.

9 LOU CORTOPASSI: And Gary, just to add that, I look at where
10 rubber meets the road, and I'll start with the work management process, the
11 outage planning process, the design change process, the long-term asset
12 management, all tools that we can compare against the rest of the fleet and with
13 resources that we do have, I'll say more efficiently and effectively, to make
14 changes to the plant that are needed.

15 COMMISSIONER MAGWOOD: Appreciate that. Lou, since you
16 have the microphone, let me just sort of ask you, one unique aspect of the 0350
17 process is that you tend to have plants that are offline for a considerable period
18 of time. I guess it'll be about two years at least that you'll be looking at. How do
19 you draw from previous experience about -- when it comes to plants that have
20 been shut down for such a long period of time? There hasn't been water flowing
21 for a long time, there hasn't been many electrical parts that haven't been
22 energized in so -- in such a long time. What's the previous experience and how
23 are you drawing from that?

24 LOU CORTOPASSI: Yeah, so we've taken procedures from plants
25 that have been in a similar process. As I mentioned, you know, looking at it from

1 the department readiness standpoint, we look at staffing, we look at corrective
2 action backlog, we look at training, we look at qualifications. From an
3 engineering program standpoint, again, being able to compare what's -- you
4 know, benchmark and compare changes we might need to make to the
5 engineering program. But probably most importantly we just have finished up a
6 reconstitution of our system health, and that's a combined team of system
7 engineers, maintenance in operations with a cross-functional look, again, to look
8 at backlogs and to look at surveillance and system readiness. And we're just to
9 the initial throes of that right now, we expect to be starting up our circulating
10 water system in the next couple of weeks, our condensate system, and start to
11 put the -- you know, start to put the plant through its paces with respects to
12 systems.

13 The other piece that we've been very cognizant of is the operators
14 and operator training and how we best keep the operators, you know, focused on
15 what an operating plant looks like as well as what we use the simulator for, you
16 know, for transient training, for emergency operations procedures. We've done
17 cycles of training where the operators will spend time at normal plant operations
18 doing their surveillances, doing their log reading, doing their normal interface with
19 plant employees. And those are just some of the things we've done right now
20 based on industry experience to ensure that the plant gets ready for an initial
21 aspect of start up, or restart.

22 COMMISSIONER MAGWOOD: Okay. Thank you. Thank you,
23 Chairman.

24 CHAIRMAN MACFARLANE: Okay. Commissioner Ostendorff.

25 COMMISSIONER OSTENDORFF: Thank you, Chairman. I add

1 my thanks to that of Commissioner Magwood's for your presentations today. I
2 want to start out just by making a comment that it's always hard to ask people
3 outside for help, and so I commend OPPD for asking for help and also commend
4 Exelon for stepping in to provide that help. There are many examples around the
5 U.S. where sometimes those kinds of circumstances don't exist. People are
6 afraid to ask for help, or people, industry partners are not willing to step in. So I
7 commend both organizations for that.

8 I want to kind of tag-team on Commissioner Magwood's questions
9 because I think it was -- my questions are very much aligned along some of his
10 thoughts, and so I'm going to piggy-back on my colleague here a little bit. And
11 I'm going to start out, Gary, in your area and I appreciate the discussion about
12 bringing in -- Exelon coming in on the operating services agreement and
13 alignment with Exelon and so forth. And I note that I think three of the five people
14 at the table here -- well, actually four of the five, you have all been doing this for
15 less than one year. Is that roughly about right?

16 LOU GORTOPASSI: At Fort Calhoun.

17 COMMISSIONER OSTENDORFF: At Fort Calhoun. And so,
18 again, multi-part question, I'll start with Gary. What was the biggest learning you
19 had as CEO in looking at how Exelon does business and how that might
20 translate to changes at Fort Calhoun? What's been the biggest issue for you?

21 GARY GATES: The biggest issue for me is the management model
22 and the rigor and preciseness of that management model. That management
23 model drives the accountability piece and it drives visibility and it drives
24 consistency. They -- and it's modularized so that we could implement it as we
25 are now and I think Susan referenced that we've prioritized the various pieces of

1 that management model that we're implementing. But with regard to interface
2 with Exelon, the management model, the preciseness, and the consistency of
3 that are the biggest issue that I've seen for improvement for Fort Calhoun.

4 COMMISSIONER OSTENDORFF: Okay. Now I'm going to shift
5 over and ask Susan and Lou and Mike -- maybe Lou, the symmetrical question.
6 I'll start with Susan. From an Exelon standpoint, when you all were brought in to
7 provide assistance to OPPD, what have you seen as the biggest area of concern
8 or the hardest area to address from where you sit with the Exelon organization?

9 SUSAN LANDAHL: I don't know if it's the hardest, but certainly the
10 most sensitive area is the people at the plant and making sure that, you know,
11 there are many good people who work at Fort Calhoun, many of them eager to
12 learn, eager to get back to the excellent performance. And making sure that as
13 we incorporate new processes, as we raise the accountability, ask deeper
14 questions that we're really doing that in a way that brings the staff along. You
15 know, it's a coaching way, it's not about, you know, things that aren't right or
16 discussed for purposes of future learning, not because you personally, you know,
17 made a mistake. So I think, you know, the most important part and the thing that
18 really takes, you know, care whether it's how we're working on something in the
19 corporate office that we're preparing to, you know, bring to Fort Calhoun for a
20 training session or whether it's the interaction in meetings, it's really making
21 absolutely sure that we consider the perspective of the individual employees
22 there because it's really -- you know, Exelon is there in a leadership role but it's
23 clearly the folks at Fort Calhoun who are going to bring the station back to
24 excellence.

25 COMMISSIONER OSTENDORFF: Okay, thank you.

1 LOU CORTOPASSI: I'll just buddy on that from really three
2 perspectives, one that Susan mentioned. Just a more intrusive leadership, more
3 questioning, and that really does translate now to the manager level, to the
4 superintendant level, to the supervisor level. As Mr. Prospero illustrated with his
5 example of industrial safety, what you see at the shift now, is the supervisor doing
6 that intrusive look on the behaviors and reporting out to Mike as opposed to Mike
7 using it as a teaching moment, we're starting to see that transition.

8 Probably the other two biggest pieces is just fundamentally how the
9 corrective action program is viewed. Is it core business or not core business?
10 Now it's core business at the start of each day, intrusive into what was written on
11 the last 24 hours, are they properly screened, are they properly prioritized, as
12 well as the back-end product review. That is core business done each and every
13 day by the senior leadership team. And then the last piece which I'll touch under
14 culture, and maybe to some extent safety culture, is as we looked at the station
15 progress from a very experienced workforce and over the past few years starting
16 to transition new people in. And we've seen this in the industry and I use the
17 term, "a culture of individual choice in the field," where there are standards
18 written, but their applicability and their consistent use maybe not has always
19 been reinforced. And we're working strongly in that area, especially the areas of
20 human performance, we mentioned industrial safety. But this is the standard and
21 the passion for preparation for a job activity and adherence to those standards,
22 observations to those standards and reinforcement is probably the biggest
23 change that we're driving down at the workforce level right now.

24 COMMISSIONER OSTENDORFF: Mike, you want to --

25 MIKE PROSPERO: Yeah.

1 WILLAIM OSTENDORFF: Your perspective please?

2 MIKE PROSPERO: The biggest thing is the behaviors of people.
3 The performance difference between 2011 and 2012 with personal safety is
4 almost remarkable. And I'll give a good example. Someone scratches their
5 nose. I want to know why. Why did you scratch your nose? Well, someone
6 scratched their nose the other day. He had his own personal safety glasses, that
7 was fine. His welding hat was a little loose. Figure out why and deal with it. And
8 then we go to the human performance with those behaviors with safety go right
9 to the human performance. And like Lou says, we've got to put it in a corrective
10 action program so that we have the learnings for the future and it's sustainable.
11 And then the only other thing that I'll add is just fixing our plant. And we're
12 making good progress doing that. But to work with the people, we've got very
13 good people at Fort Calhoun and adapting, and we're moving forward.

14 COMMISSIONER OSTENDORFF: Okay, let me shift gears a little
15 bit. I'm going to stay, though, with you and your plant manager role. Obviously
16 the NRC has issued some orders in early 2012 associated with Fukushima action
17 items. And there have been other 50.54F letters out and so forth. How are you
18 balancing the Fukushima action items with your restart checklist action focus?

19 MIKE PROSPERO: We have a gentleman dedicated to those
20 actions, he is on the team. And a good -- bigger picture, I'll call it recovery team,
21 and we've got the -- I'll call it the in-plant. Recovery team deals with a lot of the
22 issues, for example, the Fukushima issues, the flooding issues, whereas we're
23 working through the actual fixing the diesels, fixing our raw water pumps, fixing
24 our electrical buses. So we've kind of divided up and got to conquer all these
25 major activities, including the Fukushima and some of the other recovery items

1 that we're working on. We'll get the Fukushima flood issues done by -- before the
2 restart, and it's due this spring.

3 LOU CORTOPASSI: Yeah, so as Mike mentioned there's, you
4 know, several industry activities. And that can be a concern sometimes, right?
5 We get so focused internally on recovery that the rest of the industry continues to
6 progress. And so those activities, as Mike mentioned, we kept dedicated
7 resources both engineering, operations and licensing resources to meet our
8 commitments in that area. There's other areas where we'll get ready to get into
9 our period of extended operation in the latter part of the summer so there's
10 commitments and programs and processes that have been maintained in that
11 area. Transition to NFPA 805, just a number of industry initiative items that we've
12 maintained dedicated resources on above and beyond the recovery piece. And
13 then stayed in contact with industry groups and now obviously support from the
14 Exelon fleet provides an additional level of oversight and really efficiency and
15 implementation.

16 MIKE PROSPERO: you know, Commissioner, another example is
17 using the fleet. This is where the fleet comes in, really benefits us. There are, for
18 example, on emergency preparedness. We took the gentlemen, put them right
19 through their fleet peers, and it's just been a great assistance to help us.

20 COMMISSIONER OSTENDORFF: Okay. I'm not going to ask
21 another question. I am going to, though, comment on Commissioner Magwood's
22 concern that I share is how long, you know, after you have been shut down for a
23 long period of time, the ability to keep people motivated, focused is real hard. I
24 saw it numerous examples in my time in the nuclear submarine force where we
25 had ships that were in prolonged overhauls or construction periods that got

1 extended, got extended, and trying to keep that human edge at an appropriate
2 level and sustainable is really hard. And so I -- Commissioner Magwood, I
3 appreciate him bringing that up because I share that concern and I thank you for
4 your responses today. Thank you Chairman.

5 CHAIRMAN MACFARLANE: Great. My turn. So I'm happy to hear
6 that you guys have done quite a lot of learning about the root causes of the
7 issues at Fort Calhoun and you've done a lot, especially on the management
8 side, to address them, and so that gives me some comfort. Let me -- because
9 you guys ended with the question of Fukushima, I have a similar question and I'd
10 just like to hear more detail about what exactly -- what specifically Fort Calhoun's
11 done in terms of acquiring new equipment to address the mitigation order and
12 especially in terms of the flooding hazard analysis request.

13 LOU CORTOPASSI: Specifically with respect to the flooding
14 analysis, we did procure new pumps in March of last year, are finalizing
15 procedures that would allow implementation of that new equipment. But even
16 going back to the mid '90s where we've done an additional look at external
17 events, our licensing basis, you know, flood elevation of a 1,014 foot, we have
18 obviously done a lot of work with respect to response to the yellow finding in that
19 area. But above and beyond, going back to the mid '90s, we've had a mitigation
20 strategy in place for a multiple dam failure event. Again, we're going to be
21 reanalyzing that with input from the Army Corps of Engineers. That would have --
22 that mitigation strategy would be successful up to an elevation, an expected
23 elevation, of a 1,029 feet. But again the inspections that we've done both from a
24 flood inspection standpoint, as well as I mentioned the procurement of new
25 equipment, along with the strategies that allow us to continue to strengthen the

1 beyond-design-basis, especially with respect to flood.

2 GARY GATES: And with regard to this -- appreciate that question
3 because it's -- we've partnered with NPPD, with Cooper Station to do our flood
4 analysis that goes beyond the multiple -- that goes into the multiple dam beyond
5 this mitigation strategy that we talked about which covers about four. So we'll be
6 partnering with them to look at the Missouri River Basin. We're looking for input
7 from the Army Corps of Engineers. We have a parallel plan that if we aren't
8 getting -- if we can't get the input we need from that we'll have to develop a base
9 and model ourselves, but we're partnering with them so we're going to take one
10 swing at it for both nuclear plants that are on the Missouri right now.

11 CHAIRMAN MACFARLANE: Okay, thanks, I appreciate that level
12 of specificity. So let's now talk about some of the other issues. So I appreciated
13 hearing about some of the specific examples that you gave on industrial safety
14 and you spent a lot of time this morning talking about management changes. But
15 I guess I'd like to hear some concrete examples, some anecdotes that would give
16 me some assurance that some of the changes that you've implemented in terms
17 of safety culture are -- have actually -- are beginning to take root. So specifically
18 I'm interested in the area of safety culture where employees feel comfortable to
19 raise issues with management and I wonder if any of you have any anecdotes
20 you could share?

21 MIKE PROSPERO: I do. We're working on our diesel generators
22 and we had an area that we had to go up on the ladder and do some work. One
23 of the gentlemen did not feel comfortable going up on that ladder and doing the
24 work. He went and talked to the supervision and they stopped that work and
25 they got the appropriate equipment, a different pump, and we were able to put it

1 on the ground level without going up the ladder and taking care of it. I meet with
2 quite a few of the -- if anything ever comes up with that, I usually meet one-on-
3 one with that person and Kerry's organization has an independent review of
4 anything that may not come back up. So that is a concrete example that
5 occurred approximately a month ago.

6 CHAIRMAN MACFARLANE: Okay. Good, good.

7 LOU CORTOPASSI: As Mike mentioned we've been focusing a lot
8 especially with the physical work that's going on at the plant with the
9 maintenance craft feeling comfortable to stop and get help with supervision. So
10 multiple examples of some of the work that we've been doing with our intake
11 structure, lifting and rigging that didn't look quite right or feel quite right. Work up
12 on scaffolding, again, that didn't feel quite right or look quite right or didn't match
13 what they saw in their pre-job briefing. And that's what we've -- strong focus with
14 that feedback back to the craft, it does reinforce the direction that we've been
15 giving which is that passion for preparation which makes work go in the field
16 much smoother. And so a lot of focus on maintenance, a lot of focus on our RP
17 technicians, I'd say we basically pay our RP technicians to observe radiological
18 behaviors in the field. They have stop-work authority, we've been doing quite a
19 bit of work in our reactor cavity, fixing fuel transport equipment, we've done some
20 additional work on some sandbox covers. And again, with the RP technician
21 having clear, clear understanding that if work is not progressing as they would
22 expect from a radiological standpoint, that they can stop. And they do, and we
23 document it in the corrective action system and use that in our post-job critiques
24 and look to -- excuse me -- improve performance going forward.

25 KERRY IHNEN: And -- I'm sorry. Another example I would use is

1 use of the corrective action program. The -- in 2012, there was over 20,000
2 condition reports initiated by station personnel indicating that no fear to enter
3 things in the corrective action program. At meetings, one of the things that my
4 organization looks for is when an issue is being brought up in a meeting. Is there
5 an immediate reaction to either a condition report has already been written or will
6 be written. And also if you look at the shift manager turnover sheet, every day,
7 now behind every item that's new on the shift manager turnover note, there will
8 be the number of what condition report was initiated for that issue.

9 CHAIRMAN MACFARLANE: [affirmation]

10 KERRY IHNEN: To me that's indicative of an improvement in the
11 use of the CAP.

12 GARY GATES: I think the comfort level of people raising issues is
13 definitely there. And I'll give you an example. I attended an alignment meeting
14 last week. And -- the 415 alignment meeting and in that meeting there was a
15 question on some HR issues that needed to be resolved appropriately. And the
16 individual didn't hesitate to pick me out of the back of the crowd and say, "Gary,
17 you're the link to the HR, so what are we going to do about this?" So I think that
18 kind of comfort, you know, we have a mantra that we started there that we need
19 to continually focus on our nuclear safety culture and if absolutely necessary we'll
20 even use words. It's our actions that make a difference.

21 CHAIRMAN MACFARLANE: [affirmation]

22 GARY GATES: And we have to demonstrate that as a leadership
23 team and that's what we are doing.

24 CHAIRMAN MACFARLANE: Okay. What's your biggest challenge
25 moving forward?

1 GARY GATES: Biggest challenge moving forward for us, as we
2 work through the restart, is make sure that obviously we're going to make sure
3 we satisfy ourselves that everything is ready for restart and safely going forward.
4 I'm very optimistic on the future as far as Fort Calhoun goes. I think the
5 challenge of bringing a lot of new personnel on, at the last meeting we talked
6 about new employees, we're getting quite a few of them. The folks coming out of
7 the schools today are fantastic, we have a great, young, professional group at
8 our plant. But the challenge to bring them into the nuclear environment, continue
9 to share what information some of us of more experience may have had and
10 make sure that's transferred appropriately. And yet give them the freedom to go
11 forward and do things in a new and different way, so mine is to get the people
12 ready for the future.

13 CHAIRMAN MACFARLANE: Susan, what do you think the biggest
14 challenge from Exelon's point of view is?

15 SUSAN LANDAHL: I go back to the people as well. You know, I
16 mentioned making sure that it's really, you know, a team effort as we go into
17 integration, that there's good understanding by both parties of, you know, what
18 the future looks like, what the future organization processes, procedures, and
19 making sure that we're, you know, together all along because that's really going
20 to be key to make sure that it's sustainable in the long term.

21 CHAIRMAN MACFARLANE: And then the final question for me
22 and you're all welcome to jump in, any feedback on the experience of working
23 with the NRC in these areas? Any areas for improvement in that process?

24 LOU CORTOPASSI: Yeah, there's a -- if I look at right now where
25 we're at, especially having the restart checklist, you know, I mentioned our

1 implementation strategy and that's what we started with as we developed the
2 recovery plan last year, and now that we've got the complementary document of
3 what inspection looks like, that that puts us in a much more predictable, you
4 know, predictable fashion for this element of our recovery. And that's probably
5 been the biggest change or the most important change over the last six months
6 as we've been working with the 0350 panel and the Region on restart activities.

7 GARY GATES: I think, and what I really appreciate, is access to
8 the staff, and not only your time, I think we've been back three times in between,
9 and that's important to us, to share what we're doing because of the situation
10 we're in, but the access to the Region and NRR has been very good for us when
11 we need to talk about issues, and that's necessary to complete the projects that
12 we're on right now, so that access has been very good. I think -- and I'm sure
13 that will continue to be in the future.

14 CHAIRMAN MACFARLANE: Areas for improvement?

15 GARY GATES: I think what we'll do at the end as we go through
16 lessons learned is that, you know, how do we get -- as we get through these
17 restart checklists, because MC 0350 is not an often used process, and that's
18 good, but how do you implement those not-often-used processes? I think we can
19 probably provide some lessons learned from that when we're done.

20 CHAIRMAN MACFARLANE: Okay. That'd be helpful. Great.

21 Commissioner Svinicki.

22 COMMISSIONER SVINICKI: Good morning, and I add my thanks
23 to those expressed by my colleagues for your presentation. My colleagues have
24 also covered a number of important topics already in their questions, so I won't
25 cover that ground again. I can't help but reflect as I sit here that in my years on

1 this Commission, particularly in the Commission's annual meeting where we hear
2 from the NRC senior executives under the agency's review meeting of licensee
3 performance, and then we hear from licensees that are having performance
4 issues annually as part of that process. I have a lot of confidence that licensees
5 that are having performance challenges can get well. I don't know if I'm alone in
6 thinking this. I think with enough commitment and resources and obviously at
7 Fort Calhoun Station there's been a tremendous accessing of external resources
8 and expertise, as one of my colleagues mentioned, and so I know that stations
9 can improve their performance.

10 What surprised me when I came to the Commission and began to
11 hear from licensees that were in categories of regulatory inspection or oversight
12 where they were having performance challenges was I heard also about
13 licensees that had traditionally been very high performers and then had years
14 later found themselves having performance challenges, and so I don't observe
15 that there is any particular day where a licensee, again, this is just my
16 observation, comes in and says let's all take -- I think the term used was a left
17 turn -- let's take a left turn and begin to have a performance that's less than we've
18 had historically.

19 So, I've also attended a workshop at the Goizueta Institute where
20 they train incoming board members for utilities, and I was asked to come in and
21 talk about NRC, but I also thought what was really interesting was for utility board
22 members, they really wanted to tackle this issue, not just of nuclear safety
23 performance, but performance generally, whether it's a fossil or a nuclear plant,
24 and why is it that there seems to be somewhat of a cyclic process, and for some,
25 you know, they can stay at high levels of performance for longer periods of time.

1 And I also acknowledge that if you look at what INPO tracks, which is different
2 than what NRC does, but to be a top quartile performer in the nuclear -- in the
3 United States in the nuclear business, it means a higher level of performance
4 today than it meant historically, because the overall level of performance is
5 higher, and that's not, you know, really what we're talking about now. I'm kind of
6 mixing the concepts of excellent performance and regulatory requirements, and I
7 am going to acknowledge that I am kind of mixing those up, but we talk about
8 sustainability. Your performance improvement plan talks about post-restart
9 activities and I think the person who can solve this issue of making excellent
10 performance sustainable in perpetuity will be a very, very successful person
11 going forward.

12 And I remember when I first began service on this Commission, I
13 was -- I don't want to use too strong a word, but I was somewhat astonished to
14 hear that some of our top performers of the periods of time that those stations
15 had really been in the bottom, and so I don't -- you know, there's a lot of industry
16 experience on your side of the table beyond Fort Calhoun. What is the thinking
17 of any of you about this notion? I don't believe -- I think that people want to be
18 part of a successful winning organization and I don't accept for a minute that
19 there was any point in time where Fort Calhoun collectively decided that it didn't
20 want to perform well. So why -- you know, what's your thinking on why this
21 happens?

22 SUSAN LANDAHL: I'll start and say that there are a couple of key
23 elements around having the right standards, but also being sufficiently involved in
24 the industry to understand when the industry is getting better and when
25 standards are improving, because clearly performance today is better than it was

1 10 years ago or 20 years ago, as the fleet -- you know, as the U.S. or world
2 nuclear fleet continues to improve in performance, but understanding current
3 state, understanding what the best in the industry is, and constantly having that
4 internal pressure that no matter how good you are, if you're not getting better
5 you're sliding back, and then having the structure in place that makes any gaps
6 very obvious, and then having the rigor to go after them and not make excuses
7 for why they're okay, not rationalize them.

8 COMMISSIONER SVINICKI: Is that where we get to this concept
9 that it is harder to create that atmosphere at a single -- if you have a single site?

10 SUSAN LANDAHL: I believe so because it's harder to create that
11 external driving force. You know, even -- certainly there are single sites that can
12 be successful, so I won't talk in generalities, but --

13 COMMISSIONER SVINICKI: They're going to have to really
14 conscious of doing this, is that what you're saying?

15 SUSAN LANDAHL: I believe so, because they're -- they don't have
16 it internal to their organization to have that, you know, that input available, that
17 external challenge available, that knowledge of what's going on in the industry
18 available, so it makes it more difficult.

19 COMMISSIONER SVINICKI: Gary, did you want to answer?

20 GARY GATES: You can never back off from performance, and you
21 can never back off from evaluating your performance. There's a current concept
22 in human behavior that's being explored right now and the term they're using is
23 called practical drift. And it's the fact that as people we have procedures, we
24 have policies we perform, but over time we will drift away from excellent
25 performance. It's a -- I wouldn't say human nature, but it can happen. So how

1 do you fix that? You never assume that you're in -- you continually challenge
2 yourself. You continually challenge standards. You asked the question about a
3 single unit. It's a great question. Single units can run fine. We did for a number
4 of years. I think you have to decide on an individual basis as a single unit when
5 is there enough activities at your site, enough outside activities, that you really
6 are going to lose that day-to-day focus and drive that and be aware of that
7 practical drift, and a fleet allows you to do that. It eliminates that issue for you.
8 So that piece from the overall performance that you mentioned, to me, is the
9 reason why a fleet can do that, but the fundamental reason is you can never take
10 performance for granted. It can't be taken for granted. You have to challenge
11 yourself every day if you're doing the right things.

12 COMMISSIONER SVINICKI: I appreciate that. Lou, did you want
13 to add something?

14 LOU CORTOPASSI: Yeah, just a few things to add on. We have
15 the benefit right now and we leverage it, especially with our new employees.
16 We've got several, as I mentioned, engineers, new operators that in some cases
17 haven't seen the plant run. So how we're able to leverage, one, this significant
18 emotional event, as well as the amount of experience they're getting both with
19 the regulatory interface plus all of the work that we're doing, they're getting to see
20 a lot right now, and it's interesting. So how do you keep that going forward?

21 Oftentimes from a leadership perspective, you know, we wait for
22 people to get promoted to first-line supervisor and then start making leaders in
23 the organization, have to back that up all the way to, you know, selection of
24 personnel, my involvement in the selection of personnel, Mike -- the entire -- you
25 know, I'll say the entire organization's focus on our first-round draft choices, who

1 we're bringing in, and how we're creating leadership from day one from folks that
2 are, you know, starting in their initial training programs I think is one of the other
3 key elements that will help us. And then as Gary and Susan mentioned, the --
4 one of the many beauties of the fleet is just that early detection, whether it's, you
5 know, deviation from what we're seeing at the other plants or as the fleet
6 continues to benchmark on what best practices look like. You know, the ratings,
7 whether it's the monthly, the quarterly ratings, they're there to see. You can't
8 hide performance based on comparison to your peers.

9 COMMISSIONER SVINICKI: And I appreciate you mentioning that,
10 of all that the average station employee is seeing right now, I imagine this has to
11 be quite different than the last number of years that they worked there. And I
12 know that a couple of my colleagues made reference to the fact that the station,
13 you know, will have been shut down for some period of time. My sense is is
14 maybe not in the equipment that Commissioner Magwood talked about, but as
15 far as personnel, they're seeing a lot. They're probably fairly -- kept fairly busy
16 these days, and I don't think they're sitting around idle and all of the sudden
17 when there's restart they're going to go "Gee, I guess I'd better get back in shape
18 and get to work." My sense is this is really putting them through their paces in a
19 significant way.

20 And I know that there was some mention of maybe the plant will be
21 definitely shut down two years. I just want to be clear, I'm not aware of any, and I
22 think the NRC staff will also testify, that there is not a schedule for that decision.
23 Obviously as the station operators you're making all your efforts towards
24 completing the checklist and being ready for the inspection and things like that.
25 I'll be asking the NRC staff if there are any impediments to our ability that if you

1 get there will we be able to support the independent verification and reviews that
2 we need, but I just want to clarify for anybody listening, there isn't any super
3 secret, you know, schedule that says you're restarting on date X, and so I know
4 you're nodding your heads on that.

5 Gary, I just wanted to close that in your performance improvement
6 plan, you talk about additional oversight in addition to the recovery and the things
7 that you've described in your presentation today. This is the number of additional
8 oversight boards. There is an Engineering Assessment Board, a Station
9 Corrective Action Review Board, a Department Corrective Action Review Board,
10 and Condition Review Group. There's a Plant Review Committee, a Plant Health
11 Committee, Nuclear Oversight Committee, a Safety Assessment and Review
12 Committee, and a Corporate Governance and Oversight Committee. How do
13 you keep all that coherent?

14 GARY GATES: We keep all that coherent because of the nature of
15 each -- the charter for each of those organizations, and they are a hierarchical
16 organization. The broader one is the corporate oversight piece. Then it goes to
17 Kerry's organization for the oversight, and then the internal committees that the
18 operating group has. So they're all defined by charter, there's a hierarchy to
19 them, and they're coordinated very well, and I've observed that personally.

20 COMMISSIONER SVINICKI: Okay, thank you. Thank you,
21 Chairman.

22 CHAIRMAN MACFARLANE: Okay. Commissioner Apostolakis.

23 COMMISSIONER APOSTOLAKIS: Thank you. Well, my
24 colleagues covered all the issues I had in mind, so I'll be very brief. We've heard
25 a lot about safety culture today. What is safety culture? Is it what we say it is in

1 our policy statement? Is it what INPO says? Is it both? Lou?

2 LOU CORTOPASSI: Yeah. We certainly use the principles as a
3 basis for the discussion, and the beauty of the principle-based discussions is that
4 it does open up, you know, the interface with employees to talk about what does
5 it look like behavior-wise, and while sometimes it's not easy to talk about, but
6 also talking about attitude, what's in the hearts and minds of individuals when
7 they're making decisions, what's in the hearts and minds of individuals who are
8 making leadership decisions.

9 COMMISSIONER APOSTOLAKIS: How can you tell what's in their
10 hearts and minds?

11 LOU CORTOPASSI: Now that I've opened up that discussion on
12 attitudes, I'll do my best to close it. It really is --

13 [laughter]

14 -- it is that one-to-one interface. It's the group interface, as I
15 mentioned, just the time that we spend with the employees watching them
16 express, you know, both what they're expressing to me verbally, what they're
17 expressing in the corrective action program. When events -- you know, as Mike
18 mentioned, when a human performance event does occur, you know, what's
19 different when someone's watching than when someone isn't watching? Is there
20 a delta in behaviors? Is there a delta in expectations? Is there a delta in
21 performance? We use all of those to collectively measure. As I mentioned in the
22 observation piece, but now as we're getting smarter even with, you know, pulse
23 surveys and other tools that we're using down to the department level to measure
24 the behaviors, and the best we can, the attitudes of our employees.

25 COMMISSIONER APOSTOLAKIS: When we talk about safety

1 culture a minute, at the high level we talk about putting safety first and having the
2 questioning attitude and all that, can we identify one or two best ways for
3 communicating to the workforce that this is what they ought to be doing? What is
4 the best way of spreading this culture -- cultural attitude? Or maybe there isn't
5 one, and maybe there are many. I don't know, but --

6 LOU CORTOPASSI: Yeah, I really do think you hit on it from a
7 communication strategy, and I do believe it is varied on both -- I believe it's both
8 formal. For example, we have all-hands meetings that Michael and I will conduct
9 this week. We just kind of stand back and scorecard for the group where we're
10 at, where we're going, and I think that's an important interchange. I mentioned
11 some of the other communication strategies that we have, but I'll also say, I take
12 it down to the crew level, to every shift turnover that the control room does to
13 every pre-job brief that maintenance does, that supervisor, that crew is
14 establishing their safety culture, I'll say for that shift, for that day, and it's either
15 flat, it's on an uptrend or it's on a downtrend. Our observations help with that.
16 Our reinforcement to the supervisors of what their roles and responsibility help
17 with that, but I believe you can have pockets of safety culture that, you know,
18 each crew has their own, you know -- an individual crew, department, a station,
19 and how we best detect and correct that, how we measure it, how we
20 communicate it, I think it really is a very approachable formal and informal
21 communication strategy.

22 COMMISSIONER APOSTOLAKIS: But -- I'm sorry.

23 SUSAN LANDAHL: I was just going to add that I think it's the
24 consistency across all the forums that really -- you know, I don't think it's any one
25 thing. It's not just sending folks to training and teach them safety culture and

1 then walk out and do things just like they've always been done. I think it's what
2 we say in the classroom. It's the messages that come from the senior leaders at
3 the site in big forums. It's how we address individual issues when they come up
4 in smaller forums, and it's really the consistency beyond all of the interaction
5 opportunities that we have where we demonstrate by our questions, as well as
6 our follow up, what, you know, what our expectations are with safety culture and
7 how we make that healthy across the site.

8 GARY GATES: The other piece is that you really -- excited about
9 this, but the other piece is that you really have to recognize good safety culture,
10 and when you see that, verbalize it, recognize it, say this is -- that was a good
11 safety culture practice because that also illustrates to the team what you want to
12 do. It's the questioning on when you have issues, but the recognition when the
13 team does a good safety culture exercise to make sure everybody knows that.
14 That helps as much as the other piece.

15 COMMISSIONER APOSTOLAKIS: Now, Lou, you mentioned the
16 small groups and the supervisor of small group and then Susan mentioned
17 classrooms. There is really a classroom teaching of what safety culture is?

18 LOU CORTOPASSI: Yes. We mentioned one of our corrective
19 actions. There was a subset of that, was a safety-conscious work environment
20 essentially to get us back on the same page of what that important aspect of
21 safety culture meant, but then as I mentioned, you know, as we look at
22 classroom training and just the introduction of safety culture principles into that
23 forum, for example, we're teaching operability training for our engineering leaders
24 and our senior reactor operators, and just being able to tie the importance of
25 safety culture with, you know, some of the improvement areas that we made with

1 respect to how we categorize and how we fix, you know, degraded equipment at
2 the station, obviously some very good examples from operating experience. It's
3 a useful tool in training to help, you know, reinforce that principle.

4 MIKE PROSPERO: But the other thing I want to emphasize is
5 24/7. Every single night Lou, myself, and my managers get on a phone call with
6 the people at work and we cover what our priorities are, where we're going, and
7 we always start off with safety, human performance, every single night we go
8 through it to make sure we are aligned through the night to do what we need to
9 do.

10 COMMISSIONER APOSTOLAKIS: Well, thank you very much.
11 Back to you, Madame Chairman.

12 CHAIRMAN MACFARLANE: Do my colleagues have any other
13 questions? Further questions? Go ahead, Commissioner Magwood.

14 COMMISSIONER MAGWOOD: Yeah, I feel like I have to react to a
15 point of order, Commissioner Svinicki mentioned my left turn.

16 CHAIRMAN MACFARLANE: I object to the left turn thing being
17 left-handed, just to note.

18 [laughter]

19 COMMISSIONER MAGWOOD: Some of my best friends are left-
20 handed.

21 CHAIRMAN MACFARLANE: Good.

22 [laughter]

23 COMMISSIONER MAGWOOD: You're all a little strange, actually.

24 [laughter]

25 CHAIRMAN MACFARLANE: Aha. Well, there we go, Gary.

1 [laughter]

2 COMMISSIONER MAGWOOD: Just very brief to make a
3 comment. I do think there is -- I heard you talk about the single unit utilities.
4 There is a potential for losing key personnel that you can't replace very easily. In
5 the fleet it's easier to backfill when a key person leaves. When you have a fleet
6 it's easier to react to a large outage or large perturbation of operations where you
7 have a surge of activity, and I think there's evidence over time that for single-unit
8 utilities, that those sorts of events create long-term issues. I don't know if you
9 want to react to that, but that's just one of the things. When I think about left
10 turns I think about things like that, things where the plant has had to endure a
11 major change and it just has ramifications that sort of percolate over time.

12 GARY GATES: Now, for us, as I said, part of -- the major part of
13 that decision was just the breadth and technical depth and backup and ability to
14 get people for a single unit, like Fort Calhoun. The other big part of that decision
15 was looking 20 years down the road. This decision with the operating services
16 agreement has immediate effects, obviously, and we've talked about those today,
17 but it's a strategic decision, and the way I looked at that decision and
18 recommended it to our board and they looked in depth at it before their
19 agreement for it, was that it's a 20-year plan and when I looked out 20 years I
20 knew there would be challenges along the way. There will be other issues we
21 need to face, either as an industry or as a plant, and to have that kind of backup
22 is what we needed to be successful and not be back talking to you about this in
23 the future.

24 COMMISSIONER MAGWOOD: I'm sure you don't want to do that.
25 And really just a quick question for Mike. As I recall in the yellow finding -- I just

1 don't know this, I'm sure the staff could answer this -- but in the yellow finding, I
2 recall one of the issues was a procedure where the plant was planning to use
3 sandbags on top, I think it was the floodgates, to protect the auxiliary buildings,
4 some other structures. Has that been closed out? Have you -- what's the
5 situation?

6 MIKE PROSPERO: We put some HESCO barriers out on the
7 intake structure.

8 COMMISSIONER MAGWOOD: Did you really? Okay. Thank you.
9 That's good.

10 LOU CORTOPASSI: Yes. Just in addition from a flood seal, I'll say
11 inventory testing, you know, inspection piece to look at anything that's
12 penetrating, you know, the important structures below that elevation of 1,014 is
13 part of that resolution also.

14 COMMISSIONER MAGWOOD: So you had the barriers as a
15 permanent structures or temporary structures? What's the --

16 MIKE PROSPERO: They are out there permanently right now
17 unless we come up with something new.

18 GARY GATES: In addition to that we put up floodgates that are
19 heavy metal with seals on them so they seal the doors as opposed to using any
20 sandbags in many of the entrances.

21 COMMISSIONER MAGWOOD: Thank you. Thank you, Chairman.

22 CHAIRMAN MACFARLANE: Anybody else? No, okay, thank you
23 very much for your presentation. We will now take a five minute break before the
24 next panel.

25 [break]

1 CHAIRMAN MACFARLANE: All right. We will continue with our
2 meeting on the Fort Calhoun Station. And now we have our NRC staff panel and
3 I will turn it over to Bill Borchardt, the EDO.

4 BILL BORCHARDT: Thank you, Chairman. Fort Calhoun entered
5 Column Four of the reactor oversight process in September of 2011. Following
6 that, additional significant performance issues were identified. And as a result
7 the staff transitioned Fort Calhoun Station to the Inspection Manual Chapter 0350
8 oversight in December of 2011. We held a Commission meeting in February of
9 2012, which is within the six-month period by our internal procedures to hold a
10 Commission meeting. Fort Calhoun was discussed during the June 1
11 Commission briefing on the results of the annual agency action review meeting
12 or AARM meeting. Today's meeting was originally scheduled for October of last
13 year, but was rescheduled because of Hurricane Sandy, as you remember. And
14 given that 11 months have passed since the February briefing, we're here today
15 to update the Commission on the current status of the staff's inspection activities,
16 results, challenges and our path forward.

17 I should remember you that any lessons learned during the
18 oversight process of Fort Calhoun Station will be incorporated into our Manual
19 Chapter 0350 and into the reactor oversight process to improve their
20 effectiveness. You talked about in the first panel this doesn't happen all that
21 often that a plant's in 0350, so we take advantage of every time we do have the
22 situation of going back, revisiting the guidance, and making any improvements
23 that are necessary. We will be discussing Fort Calhoun at our next agency
24 action review meeting and at the next Commission meeting that reports on the
25 results of the AARM meeting.

1 The oversight of Fort Calhoun is in fact an agency-wide effort.
2 Region IV is leading the effort, but has the support of the other Regional offices,
3 as well as the offices of Nuclear Reactor Regulation, and the Office of Public
4 Affairs. And just to address one of the questions that came up in the first panel,
5 I'm very confident that the NRC has adequate resources to deal with all of the
6 inspection and technical review activities that we can foresee. While I think we
7 have a good understanding of the scope of the work, we don't have the exact
8 schedule yet. So there may be times when we'll need additional support from the
9 other three Regions to provide inspection assistance or be able to utilize the
10 resources from a number of different program offices to do the technical work.
11 But you'll hear some more from Elmo, Louise, and Mike about those kinds of
12 activities coming up. So I'll turn the presentation over to Elmo.

13 ELMO COLLINS: Thank you, Mr. Borchardt. Chairman, NRC
14 Commissioners; good morning. I think as you just heard from the previous panel,
15 Omaha Public Power District has been working hard to determine the causes,
16 extended conditions, and a necessary corrective actions for what we call a restart
17 checklist and beyond. Since Fort Calhoun was placed in Manual Chapter 0350
18 oversight a little over a year ago, the NRC has not only been tracking the
19 progress, following the progress, but the panel has been meeting and formulating
20 and understanding of the issues what should go on the restart checklist. And so
21 what needs to be completed. And of course that is published and those
22 commitments are memorialized in the confirmatory action letter.

23 And so today what we want to present for you is just a quick
24 detailed overview of the process we're using and where we're at with respect to
25 status results challenges in the path forward. And to help us give that

1 presentation today is Louise Lund; she is the vice chair for the 0350 panel. Tony
2 Vegel, the chair was going to be here, but he was unfortunately taken ill. I
3 needed to have him stay home because he's got a lot of work -- he's got to get
4 healthy, he's got a lot of work ahead of him. So, but in his place, Mike Hay, who
5 is the branch chief for the Fort Calhoun Station, also a member of the 0350
6 oversight panels. We'll give you that presentation. So with that I'll turn the
7 presentation over to Louise.

8 LOUISE LUND: Okay, thank you, Elmo. Good morning, Chairman,
9 Commissioners. My name is Louise Lund and as Elmo said I'm the vice
10 chairman of the 0350 panel and I'm also the deputy division director for the
11 Division of Operator Reactor Licensing in NRR. I plan to provide a very brief
12 overview of how Fort Calhoun entered the Inspection Manual 0350 process, the
13 actions NRC has taken as a result, and the outreach activities that are
14 associated with this process. My comments will be brief as I plan to reserve
15 much of our time for Mike to provide current status and insights from the staff's
16 initial inspections, next slide.

17 So the history of the -- this is slide 4, 2011 flood. In 2010 the NRC
18 finalized a finding of yellow significance in the reactor oversight program. This
19 dealt with an inadequate flood strategy that was identified by NRC inspectors. In
20 2011 the Fort Calhoun Station was in the process of preparing for the 95-002
21 inspection, which is conducted for a plant that enters the degraded cornerstone
22 of the reactor oversight process. Ultimately, that inspection was scheduled for
23 June of 2011. However, just before that in May, we received notification, both
24 the licensee and the NRC, that the Corps of Engineers planned to increase the
25 release rates from the dam's -- their Missouri River system to unprecedented

1 levels. The projected water at the Fort Calhoun Station that they were given by
2 the Corps of Engineers indicated that they would experience water on the site at
3 the station, which you can see in slide four. On June 6, the licensee declared an
4 unusual event. The waters were approaching 1,004 feet, which is the grade level
5 at the site, which is also the emergency action level for an unusual event at Fort
6 Calhoun Station. The water peaked at 1,006 11 inches in July of 2011. Next
7 slide, please.

8 The history of the breaker fire in June 7, the licensee -- of last year,
9 the licensee experienced another event where a fire started in a safety-related
10 480-volt electric breaker. You can see the result of this in slide five. In August
11 Region IV was finalizing a finding of white significance associated with the
12 reactor protection system. This combined with the yellow flood finding, earlier
13 greater-than-green security findings and being in the fifth quarter of the degraded
14 cornerstone, NRC's assessment determined that the Fort Calhoun performance
15 warranted the oversight provided by Column Four of the reactor oversight
16 process. Fort Calhoun entered Column Four of the action matrix on September
17 1, 2011.

18 In September we conducted reactive inspections, primarily to look
19 at the fire that had occurred on June 7 in the safety-related switchgear and there
20 were several performance deficiencies identified that were characterized by
21 having a high safety significance, which is red. Based on this significant
22 operational event and other safety and security significant issues, Region IV, in
23 consultation with NRR and with the executive director for operations, decided
24 that the Manual Chapter 0350 process was the most appropriate oversight
25 guidance for use at Fort Calhoun Station. On December 13, 2011, Fort Calhoun

1 transitioned out of the normal reactor oversight process into the Manual Chapter
2 0350, which is the oversight of reactor facilities in a shutdown condition due to
3 significant performance or operational concerns. Next slide.

4 So the NRC actions: we conducted a public meeting in Omaha
5 with the licensee as the waters were starting to go down to understand their
6 plans, their actions post-flood for inspections test and verifications of equipment
7 in the site to make sure that the facility was properly prepared for return to power.
8 This resulted in the substance of our confirmatory action letter that we issued on
9 September 2, 2011. It had some other actions in there for equipment problems,
10 but it was primarily focused on restoring the plant and the equipment to pre-flood
11 conditions. The confirmatory action letter was issued prior to entry into the
12 Manual Chapter 0350 process.

13 Subsequent to that a new confirmatory action letter was issued on
14 July 11, 2012, following entry into Manual Chapter 0350 to confirm OPPD's
15 agreement to complete sections one through five of the restart checklist. This
16 restart checklist contains those actions that the licensee committed to implement
17 that will be confirmed by NRC inspection activities prior to plant restart. The new
18 confirmatory action letter has all the items from the previous confirmatory action
19 letter plus items specific to safety culture, organizational effectiveness, resolution
20 of significant performance problems, NRC inspection letter procedure 95-003 key
21 attributes, among others.

22 In addition to these oversight activities, the NRC plans to conduct
23 an assessment to determine if the NRC oversight process provided sufficient
24 warning to the significant reductions in safety that occurred at the Fort Calhoun
25 Station. This assessment will be conducted by reviewing the types and causes

1 of performance problems that led to entry into the Manual Chapter 0350 process
2 with previous performance indicator in inspection program data. The findings
3 from this assessment will be documented in a separate report co-addressed to
4 the Region IV regional administrator and the director of NRR. Next slide:
5 outreach, talking about outreach activities. I'm sorry; it's actually the previous
6 one.

7 We've been engaged in significant outreach activities near the site
8 that have been tailored to reach those areas close to the plant, as well as, you
9 know, around the largest city, Omaha. We've used a combination of formal
10 meetings with an open house and poster-board format to enable us to
11 communicate most effectively with the populace in that area and hear their
12 concerns and questions. We've also reached out to concerned individuals and
13 local organizations and groups in order to answer their questions directly. We
14 conducted seven public meetings in Nebraska last year with a large turnout,
15 averaging about 150 attendees per meeting, and established a special NRC
16 oversight at Fort Calhoun website to make it easier to find information for those
17 interested in our oversight activities. One particular item on the website is the
18 video footage taken during the public meetings. We've received many comments
19 from the public that they value having access to that footage.

20 What we've heard repeatedly commented on from our discussions
21 and the meetings, is that the public has questions about, and is concerned about,
22 the electricity rates, the agreement with Exelon, and potential for future flooding.
23 And lastly, we recently held a working-level meeting, public meeting here at
24 headquarters in December on one of the important topics that you've heard
25 about, containment internal structures. And now I'd like to turn the discussion

1 over to Mike Hay, Branch Chief for Fort Calhoun from our Region IV office, Mike?

2 MICHAEL HAY: Thank you, Louise. Good morning

3 Commissioners and Ms. Chairman. My name is Mike Hay. I guess before I get
4 started, I'd like you all to know I've been the branch chief for Fort Calhoun for
5 three months so when you have your questions keep that in mind.

6 [laughter]

7 You know, just to give you a little perspective on my background. I
8 had 10 years nuclear Navy, I was an electrician and a staff instructor. I've been
9 with the NRC now for about 16 years as a resident, a senior resident, a health
10 physics inspector, and I'm currently on my fifth branch chief job. I've dealt with
11 plants in all columns of the action matrix and now a plant in Manual Chapter
12 0350. So anyways that at least gives you a little perspective. I'm just trying to
13 demonstrate that I feel I do have a good understanding of what a good performer
14 is and what a poor performer is and so hopefully when the questions come up, I
15 can give you different perspectives on that.

16 Today I plan to discuss with you the current status of NRC
17 inspection activities and our assessment results. I plan to talk about current
18 challenges that we're facing and I plan to look ahead at the path forward. You
19 know the big message that I want to impart is, you know, we're verifying that the
20 plant is safe to operate before we recommend restart and, you know, that's the
21 most important thing to everybody that's out there doing inspections.

22 The overall scope of the actions described in the confirmatory
23 action letter of June 2012 were developed to ensure that significant safety and
24 security issues are adequately addressed, specifically, you know we've already
25 touched upon the red breaker fire issue, the yellow flooding issue that dealt with

1 inadequate mitigation strategies. One that we haven't talked about in any detail,
2 but there was a white finding that was involved with a degraded reactor
3 protection system. And then there's been multiple security greater-than-green
4 issues that really hasn't gotten much attention, but are very important and there's
5 a lot of inspection activities that will be done to follow up on those issues.

6 In addition to those significant inspection issues, the confirmatory
7 action letter also addresses that the licensee thoroughly evaluate the impact of a
8 flood and ensure that the system structures and components are, you know,
9 ready for a restart following the flood event. We're also looking at the programs
10 and processes that resulted in the decline in performance. We'll be talking more
11 in detail about some of these program and process deficiencies, but those are a
12 major effort, not only prior to restart, but I believe post-restart also.

13 The NRC agrees that the Fort Calhoun Station has taken significant
14 steps to evaluate both programmatic and technical deficiencies at the site.
15 These steps have included bringing in outside assistance from Exelon and the
16 use of outside experts in specific areas. You know they did a safety culture
17 assessment last year where they used a third party support for that and we've
18 also talked about the containment structure and containment penetration issue
19 where they've looked at -- where they've gotten a lot of outside technical support.
20 I will tell you that, you know, not only has some of these issues caused the
21 licensee to seek expertise, but it also has been a challenge in-house for us to
22 ensure we have the proper expertise to handle some of these issues. And right
23 now I do feel confident that we have the in-house expertise. It's just a matter of
24 finding the people with the availability to do the inspections. But we haven't had
25 any challenges yet where that hasn't happened.

1 We have a very thorough and detailed NRC inspection plan that
2 was created and is being implemented that ensures both the technical and the
3 programmatic issues are being adequately addressed. Last year we performed
4 over 3,000 hours of inspections and that was using inspectors from all four
5 regions and headquarters. I mean it truly has been an agency effort and it will
6 continue to be so in the future. The inspections have covered all significant
7 areas of licensed activities that include ops, engineering, fire protection, radiation
8 protection, emergency preparedness, security, and even a trip that we made to a
9 vendor site that was involved in supplying the 40-volt breakers that resulted in
10 the fire at the site back in 2009. Our primary focus has been and will continue to
11 be the assessment of licensee corrective actions involving these programmatic
12 and technical problems, independently verifying that Fort Calhoun Station is
13 thoroughly evaluated, the extent of condition, and implementing effective actions
14 to fix the problems and prevent their recurrence. Slide eight, please.

15 You know obviously we're doing many, many inspections and
16 they're very focused. We put together a basis document that clearly articulates
17 exactly what we're going to inspect. This picture here is a picture inside the Fort
18 Calhoun containment. As a matter of fact, the person that you can see their face
19 is Jacob Wingeback; he's my resident inspector at Fort Calhoun Station. As a
20 matter of fact, I was in containment at this time and so was Tony Vogel. And we
21 were with the licensee getting a hand's eye view of the containment structure
22 issues and exactly what, you know what's the impact and based at that point in
23 time what the licensee was planning to do to resolve the problem.

24 I'll get into more detail later about this issue, but I will say it's a very
25 complex issue. Clearly the margins of safety have been affected. And as the

1 licensee said, you know, they are evaluating the condition and in what we call
2 operability space, meaning it's a non-conforming condition, but operable, and
3 we're going to have a lot of NRC inspection activities that will be taking place to
4 validate that the structure is in fact operable before restart. And then it was
5 already discussed that last month we had a public meeting to specifically discuss
6 this issue with our technical staff here at headquarters. Next slide, please.

7 Next I'd like to present our inspection results thus far. The licensee
8 has made significant progress with respect to identifying programmatic
9 deficiencies and how these problems have manifested and the specific concerns
10 affecting plant system structures and components. In addition, the licensee's
11 causal analysis and extended condition evaluations in general have shown
12 improvement. Although it should be noted, as previously discussed, the licensee
13 has had to reevaluate several areas either based on NRC comments or self
14 identified by the station. Although Fort Calhoun Station has made significant
15 progress in identifying issues, significant work remains ahead of the licensee to
16 complete the implementation of corrective actions. As the licensee previously
17 discussed, most of the significant restart checklist items have not been
18 completed through the implementation stage. Although the NRC has been
19 following the licensee's progress, the majority of our NRC inspection activities will
20 be performed after the licensee has completed all of the reviews. Next slide,
21 please.

22 I'll now talk about some of the challenges. There are significant
23 programmatic and technical challenges remaining that the licensee is currently
24 addressing, which need to be independently evaluated by the NRC. The
25 licensee completed a collective evaluation. Basically, they looked back at

1 historical problems and based on the causes of those problems, they identified
2 15 what they call fundamental performance deficiencies. These 15 fundamental
3 performance deficiencies in effect were the result of what caused the decline in
4 performance over the years at the site. I've got just a sampling here of some of
5 these fundamental performance deficiencies. They include the corrective action
6 program, leadership, organizational effectiveness, engineering design,
7 configuration control, equipment reliability, work management, and safety culture.
8 The NRC will evaluate the licensee actions regarding all 15 of these fundamental
9 performance deficiencies with significant inspection activities that will focus on
10 improvements to the corrective action program, engineering, operations, and
11 maintenance programs.

12 Regarding corrective action program implementation, in the past
13 the program was not consistently effective in ensuring the problems were
14 identified at the appropriate threshold and thoroughly evaluated. Specific areas
15 for improvement included the licensee's ability to thoroughly evaluate problems
16 to determine their causes, identification of corrective actions that correlate to
17 these causes, and timely implementation of corrective actions. In addition, there
18 was a lack of effective internal self-assessments and nuclear oversight to verify
19 that the problems or issues were fixed and that the corrective actions were
20 effective. Regarding maintenance and engineering, numerous equipment
21 deficiencies have resulted from inadequate implementation of these programs.
22 I'd like to just talk about a couple of examples.

23 One example deals with what's called equipment service life. The
24 licensee did not have a robust program that would keep track of when certain
25 things needed to be replaced, whether they be relays, valve work, you know, I

1 could just go on and on. They have hundreds of these items. And I will say, you
2 know, the licensee has done a really good job identifying what needs to be done.
3 The challenge now is getting the parts and getting the time to bring all of this
4 equipment back to the standards that it should be at. And I will say they are
5 doing a lot of work in that area, but I'll also comment and say there's going to be
6 a population of equipment where, for whatever reasons, vendor-recommended
7 replacements or maintenance activities probably will not be done. And in those
8 cases the licensee's going to have to evaluate why that equipment is still capable
9 of supporting plant restart. The NRC will be reviewing all of those evaluations.

10 A number of significant technical challenges are also currently
11 being addressed. Two examples that we've already talked about deal with the
12 containment internal structure not being built in accordance with design
13 requirements. And just to give you a little perspective on that issue, you know, a
14 couple months ago when I was at the site in containment with the experts that
15 were evaluating this issue at the site, you know, they were talking about -- well,
16 first of all the real problem is there's a number of beams that support loads that
17 aren't adequately built and, you know, we talked about -- well, we didn't talk
18 about what some of this stuff supports, like safety injection tanks. But the bottom
19 line is the beams aren't adequate and so they're looking at installing a number of
20 columns that will basically support these beams. And these columns, you know,
21 you can't just put one column in between one floor, you have to go all the way
22 down to the base. So there's going to be a number of significant modifications
23 that could be needed to support the containment structure issue.

24 Another issue that we're working on deals with the containment
25 electrical penetrations. Back in the '80s there was a report from a lab that

1 indicated that the penetrations that Fort Calhoun had wouldn't be sufficient to
2 support a design-base accident. What the issue was is you've got conductors
3 that are insulated by Teflon and then you've got a seal of Teflon that degrades
4 with a lot of radiation. And I was at the labs a couple months ago when they
5 were testing these penetrations and the Teflon basically disintegrates under a
6 high-radiation condition. And so the concerns there is not only do the conductors
7 lose the insulation, so you get hot shorts and grounds, but you can also lose the
8 seals and therefore containment integrity could be affected. This is another issue
9 where the licensee has taken a lot of actions to get outside help and is going to
10 require a lot of NRC use also. Slide 11, please.

11 As the Fort Calhoun management team described to you earlier,
12 they've done a lot of work, but a substantial amount of work still remains. The
13 licensee is actively identifying specific corrective actions to address the many
14 technical issues and is developing the timelines for implementing these actions.
15 The NRC is closely monitoring licensee progress to ensure our inspections are
16 being implemented -- I'm sorry. The NRC is closely monitoring licensee progress
17 to ensure our inspections are being implemented in a manner that is effective
18 and efficient. In November of 2012, the NRC issued the restart checklist basis
19 document. And basically what this is is it's a list of about 450 discrete items that
20 clearly articulate, like I described, all of the inspection activities that we will
21 implement which will satisfy all of the main aspects of the restart checklist that's
22 in the confirmatory action letter. Our goal is to ensure that Fort Calhoun Station
23 is self-identifying and addressing their performance issues through thorough and
24 independent NRC inspections. Slide 12, please.

25 In addition to the inspections being performed by individual

1 inspectors on a routine basis, a number of team inspections will also be
2 implemented to focus on key areas. Recently, we completed a focused
3 engineering team inspections of the auxiliary feedwater system. Starting this
4 month we'll be conducting significant team inspections that will focus on the
5 effectiveness of the licensee's corrective action program and safety culture.
6 Additionally, we have upcoming inspections that deal with security. As I already
7 talked about, there were a number of greater-than-green security issues. And in
8 addition to that, we will also be performing operational assessment team
9 inspections during heat-up activities.

10 In addition to ensuring the plant is safe to operate, the NRC will
11 also verify that the licensee has established appropriate measures to monitor the
12 effectiveness of performance improvement initiatives. These measures will be
13 tailored to fit the specific enhancements the licensee is developing to address
14 programmatic performance deficiencies. The licensee's development and the
15 implementation of these effectiveness measures will be key to ensuring that
16 corrective actions are resulting in improved performance and when these
17 outcomes are not obtained, additional actions can be implemented.

18 The 0350 panel recognizes that there is still a substantial amount of
19 inspection activities that need to be performed. The NRC has no timeline for
20 when the plant will restart. Currently our overriding priority for the 0350 panel is
21 to ensure that we thoroughly and independently verify that the plant is safe to
22 operate. The 0350 panel will not recommend restart at Fort Calhoun Station until
23 we have assured ourselves that the people, processes, and equipment at the
24 station are ready to support safe plant operations. Thank you. And now I'll turn
25 over to Elmo for closing remarks.

1 ELMO COLLINS: Thank you, Mike. Commissioners, I hope you
2 can see that there's considerable amount of depth and detail in the work that
3 we're performing with the 0350 oversight and the inspection that we plan to
4 perform. I also hope we can leave you with the impression that the 0350 panel is
5 up and running. There's a high degree of cooperation between the region,
6 headquarters and the other regional offices. There's truly an agency effort. And
7 with me here today also is Kriss Kennedy, the director of reactor projects in
8 Region IV. He has overall oversight for the reactor plants, but is also tasked with
9 making sure that the 0350 panel efforts are integrated. Today the path forward,
10 while containing some uncertainties, is much clearer than it was when we met
11 with you in February of 2012. The items for NRC inspection are identified, and
12 we will inspect them when the licensee is ready. And for the NRC the bottom line
13 is safety. And we will perform the amount of independent verification that we
14 need to verify that the plant's ready to return to power operation. And this
15 concludes the staff presentation.

16 CHAIRMAN MACFARLANE: All right. Thank you, guys, very
17 much. Much appreciate it. Let's start off questioning with Commissioner
18 Magwood.

19 COMMISSIONER MAGWOOD: Thank you, Chairman. Thank all
20 of you for your presentations. Let me start by, you know, I -- as Bill can testify,
21 I'm sometimes a little harder on the staff, but it -- of course and it's the positive
22 part. But, you know, I need to say that I also like to recognize when I think the
23 staff has done outstanding work. I think this is a good case in point. When I
24 think I met with Elmo very early in the evolution of this discussion, even before
25 the 0350 manual was activated, it was very clear there were a lot of open

1 questions, it wasn't clear what process or procedure we were going to use to
2 apply to Fort Calhoun. There were a lot of people speculating about what
3 direction this panel will take. And this evolved in a very, very methodical
4 direction, involving a lot of different elements of the agency, a lot of different
5 people who were pulled in from other tasks because of their expertise, and it
6 resulted in an inspection approach that's very well-defined, very precise, and has
7 given the licensee a very clear path forward. And I think that's to be
8 commended. Of course, Mike gets no credit for any of this because he's only
9 been here for three months.

10 [laughter]

11 One of the things that I think that comes to mind when you hear
12 about this was that some of the issues -- in fact, a lot of the issues that we're
13 talking about, you know, the penetrations in containment, for example, which I'd
14 love to spend some more time talking about, may want to get briefing on that,
15 and even the structural integrity of inside containment. These are not issues that
16 arose from the ROP findings. These are things that you found after the fact, after
17 the flood. And it's, again, something that happened after the flood. So it raises a
18 question in my mind. What's our ability to find these things before something
19 goes wrong, that brings our special attention onto a plant? I mean if there is
20 some other plant that has structural issues inside containment, how will we ever
21 figure that out? How will we find that?

22 ELMO COLLINS: I'll start, Commissioner. In Fort Calhoun, this is a
23 challenge, I think, for the reactor oversight process. It truly is incident event-
24 driven. It is a sampling program and tends to focus on the more active
25 components of a facility. We do have the component design basis inspection,

1 which was put in place after Davis-Besse. So we do have an inspection effort
2 that happens once every two years at a site, specifically to go identify passive
3 components based on their risk significance, and pursue those to the extent that
4 we understand the design basis of that component and that it's in place and it is
5 being maintained. But once again, that's a sampling program. So I think that's
6 our best effort to get at these types of passive components right now. So we do
7 have a feature, it's not meant to be an entire revalidation of the plant's design,
8 so...

9 COMMISSIONER MAGWOOD: In particular with the Teflon seals,
10 have you put out notices to other licensees? Is this something that, as we found
11 this, are we looking at this specifically at other plants?

12 ELMO COLLINS: The answer is yes. This is actually a historical
13 issue. It's well known and been well identified. The application at Fort Calhoun
14 hinged around safety-related penetrations versus non-safety-related
15 penetrations. This issue was raised back in the 1980s --

16 COMMISSIONER MAGWOOD: At Fort Calhoun?

17 ELMO COLLINS: Industry-wide. The issue with Teflon in
18 penetration and seals in Teflon used for insulation of piping under the
19 environmental qualification programs. So we got a certain frame put around it,
20 hinged around electrical components inside the containment, active components
21 inside the containment. Those that needed to perform functions during the
22 accident where it could be exposed to the high radiation. And that's how Fort
23 Calhoun implemented it. It was with that focus, and if the circuit was deemed not
24 safety-related or not needed during the accident, it did not get the attention as
25 the others did. And so the Teflon remained in place.

1 COMMISSIONER MAGWOOD: So the Teflon at Fort Calhoun is
2 non-safety? Is that what you're saying?

3 ELMO COLLINS: With the electrical circuit.

4 COMMISSIONER MAGWOOD: The circuits were not --

5 ELMO COLLINS: The circuit going through the containment
6 penetration -- obviously the containment penetration -- the containment isolation
7 function is a safety-related function.

8 BILL BORCHARDT: Yeah, just to step back for a second. All
9 reportable events that licensees report to us, inspection findings are reviewed by
10 the events assessment group and they're assessed if there's sufficient
11 experience. I believe that this could be a more generic issue. We send out a
12 generic communication, which could range from an information notice, which is --
13 just informs licensees there's something they might want to follow up on to higher
14 levels of regulatory oversight.

15 COMMISSIONER MAGWOOD: Right. In this case, was
16 something put out?

17 BILL BORCHARDT: Previously.

18 COMMISSIONER MAGWOOD: Previously, but nothing new,
19 because this isn't new. But I mean, this distinction between the safety and non-
20 safety conduits. Isn't that a little bit of a new issue?

21 BILL BORCHARDT: I'm not sure.

22 MICHAEL HAY: Yeah, well the decision at Fort Calhoun back in
23 the '80s when they received the information that this type of penetration was not
24 going to work, was they, like Elmo was saying, they replaced the safety-related
25 penetrations but they didn't replace the non-safety. And so, you know, that's

1 what's in the plant today.

2 COMMISSIONER MAGWOOD: Right. But that's the problem.

3 ELMO COLLINS: Yeah, right. The issue was reported, so we have
4 a new event report. So that's publicly available, but we do need to consider this
5 further. And we think we're waiting on the licensee's ongoing evaluation to see
6 where it actually leads. But this distinction in how it was applied to Fort Calhoun
7 is good operating experience for the industry.

8 COMMISSIONER MAGWOOD: Appreciate that, and might want to
9 follow up on this one a little bit later in more detail. Obviously one of the safety
10 culture, you know, I think my colleagues talked about this a bit earlier in the
11 previous panel, was really essential to what's happened at Fort Calhoun. Have --
12 from what your interactions with the plant staff as we've done inspections, have
13 we begin to see any turnaround ourselves beyond what the assessment's been
14 telling us? Have we been able to see it on the ground?

15 MICHAEL HAY: Yeah, I would say we are seeing a lot of different
16 things that show us improvements are taking place. You know, if you're at the
17 plant on a daily basis, you're seeing that they're, you know, working on valves,
18 they're working on diesels, they're working on pumps, restoring those to vendor-
19 recommended conditions. And so from that perspective, I think you'll see
20 physical evidence that the plant is improving. I think from the personnel
21 standpoint, you know, we're still seeing where there's some human errors, don't
22 get me wrong. You know, there's been some operational incidences where
23 they've had valve line-ups that didn't go right. As the site talked about, they've
24 had maintenance activities where wires didn't get landed right.

25 But I will say that, you know, one of the things that we're seeing

1 different now is how the licensee is addressing those problems, I mean,
2 differently than how they would address them in the past. I think we're also
3 seeing improvements with respect to the corrective action process, where the
4 licensee is not only entering more issues into the corrective action process,
5 which has been a significant improvement. One of the things that my residents
6 often complain a bit about is, you know, it went from about 50 condition reports a
7 couple years back to 300 per day. So they spend a couple hours a day reading
8 condition reports that are written.

9 But I think also, you know, not only from the identification
10 standpoint, but also from the thoroughness of how they evaluate problems.
11 We're seeing where they're even looking back at some of the previous things that
12 they've evaluated and determined this isn't good enough. And so that's delayed
13 some of our inspection activities because those are items that we planned to
14 inspect, but it does reflect the fact that they are looking at problems with a
15 different set of eyes today.

16 COMMISSIONER MAGWOOD: As I recall the plan that we have
17 for inspecting Fort Calhoun includes assessments to whether the third-party
18 assessment has been satisfactory. There'll be an evaluation of that. Is there a
19 timeframe when we expect to reach that conclusion?

20 MICHAEL HAY: Just on clear, are you talking the third-party --

21 COMMISSIONER MAGWOOD: Third-party, yes.

22 MICHAEL AHY: Yeah, yeah, starting next week is our first week.
23 There's going to be a team of five individuals, again, different folks from different
24 regions and headquarters that are going out. And they'll be starting the safety
25 culture inspection from the NRC's perspective. And, you know, part of that

1 inspection next week is to review previous assessments and the one they just
2 performed last year, and validate that there's independence in that safety culture
3 assessment. It's going to be a two-week on site inspection. The next week is in
4 February.

5 And, you know, one of the big focuses of this inspection, besides
6 looking at the results of their own assessment and what actions they're taking,
7 but a big portion of what we do is we have what we call focus group interviews
8 with a significant number of site personnel. And that way we can get their
9 insights directly and it'll help us validate the results of their assessment and the
10 actions that they're taking. And it also gives us a perspective on how in tune are
11 the staff with the site's problems and the actions that the site is taking with
12 respect to those problems.

13 COMMISSIONER MAGWOOD: Excellent. I appreciate that. And I
14 guess we'll hear more about that during the AARM coming up later this year. So,
15 again, good work, except for Mike --

16 [laughter]

17 And thank you for the presentation. Thank you Chairman.

18 CHAIRMAN MACFARLANE: Commissioner Ostendorff.

19 COMMISSIONER OSTENDORFF: Thank you, Chairman. And
20 thank you all for the presentations today. I want to start out at a fairly high-level
21 question for Elmo, and others can add in as you want them to. With respect to
22 the Manual Chapter 0350 process, I recognize we don't do this very often. What
23 historical examples and NRC regulatory experience are helping you and your
24 team look at how to best handle this 0350 process?

25 ELMO COLLINS: The salient example which has informed us has

1 been the experiences at Davis-Besse. That's the only one that I'm aware of, at
2 least for any length of time in the reactor oversight program. And so there were a
3 number of changes made to 0350 after that experience. The 0350 process was
4 developed well before the reactor oversight process, and so I think we're still --
5 we learned a lot from Davis-Besse. I think we're going to learn a few things out
6 of this one as well. And what's the best way to integrate those two efforts?

7 0350 has guidance, but we continually go back to the inspection
8 procedures, the inspection guidance of the reactor oversight process to pull from
9 those to know how we're going to do our process. One challenge I see in
10 particular is how we make sure we accomplish the 95-003 level of activities
11 under the 0350 process and how we're applying them here at Fort Calhoun. So
12 we'll evaluate that.

13 COMMISSIONER OSTENDORFF: Is there any particular example
14 from Davis-Besse that has had a bearing on how your team has approached the
15 Fort Calhoun inspection?

16 ELMO COLLINS: I think we took that information and developed
17 our -- I'll say our implementation strategy -- for Fort Calhoun. The goal of 95-003
18 is to really nail down all the key performance issues at the site, fundamental
19 performance deficiencies. And here, we really are relying on the licensee to
20 conduct that effort. We developed that process to inspect them as they're going
21 through that process, and then we'll do our independent verification at the end.
22 That's a different approach -- rather than go out with a 25-person-team inspection
23 for three weeks, so...

24 COMMISSIONER OSTENDORFF: If I heard correctly, I think you
25 or Mike said that there's 450 discrete items on this restart plan. Is that what I

1 heard?

2 MICHAEL HAY: Yes.

3 ELMO COLLINS: That's the details of the specific inspections.

4 COMMISSIONER OSTENDORFF: I don't want to react to a
5 number, but it seems like a large number to me. And I'm just curious -- you
6 know, how -- help the Commission put in perspective that number with where
7 things were with respect to the flooding, electrical fire issues, you know, the June
8 of 2011 time period.

9 MICHAEL HAY: Yeah -- I guess, to put it in broad terms, flooding
10 recovery actions. Every system has to be assessed as to was there an impact
11 from the flood? So right there you've got 25 items, of which, you know, 80
12 percent of the systems on the site weren't even touched by the flood, so there's
13 no impact. You know, you've got the fundamental performance deficiencies.
14 Each one of those, which there's 15 of them, we'd like to take a look at. You
15 know, what was the cause of the fundamental performance deficiency? You
16 know, what are the actions that the licensee plans to take and was the extent of
17 condition adequate? So there's 45 more examples.

18 For each of the significant performance deficiencies, again, we're
19 going to be taking a look at the adequacy of the root cause, the extent of
20 condition, and the corrective actions. So each one of those has at least three
21 distinct items associated with them. The red breaker fire, you know, the licensee
22 had put together a list of, I think at least 40 or 50 discrete things that they would
23 be doing to address the fire. And those are in their integrated performance
24 improvement plan, and we went through that. And the important ones, we put
25 into our basis document so that we could look at, you know, if you're replacing

1 breakers, we want to look at that. We want to look at the post-maintenance
2 testing, you know. So, a lot of those are, like I'm talking about, you know, they're
3 following up to flood impacts, the significant issues, and the fundamental
4 performance deficiencies.

5 COMMISSIONER OSTENDORFF: Okay. Let me then now shift --
6 I'm going to stay with you and Elmo -- on your slide 10 on challenges. And I
7 know that -- I think Elmo, in February of 2012, we had a meeting here. You
8 talked specifically on the design control process for replacement of electrical
9 breakers. And, had that been a key factor in this whole electrical fire aftermath?
10 Can you comment in that area, Mike and Elmo, about -- has the licensee made
11 progress in that particular substantive area?

12 ELMO COLLINS: I -- go ahead, Mike.

13 COMMISSIONER OSTENDORFF: Whoever wants to answer it,
14 yeah.

15 MICHAEL HAY: Yeah, I will tell you that we've had a number of
16 inspection activities that have specifically looked at the actions related to the fire.
17 I'll tell you that in probably the broadest perspective, we're comfortable with the
18 actions that the licensee took. There are a couple of areas that we're still talking
19 about where we're not sure if we're, you know, completely certain that the
20 licensee has addressed all of the technical issues related to the fire. However,
21 one of the things that the licensee recognizes is that, you know, the processes
22 that they implemented that installed those 40-volt breakers, you know, the 50.59
23 process, the design control processes, that they were not adequate. The receipt
24 of the breakers and their inspections of those breakers, those are all different
25 processes that the licensee has improvement initiatives in place. I will tell you

1 that we haven't completed all of our inspections of those activities. So I'm
2 basically telling you where we're at today. You know, I'm not at a position to tell
3 you that we've closed these items and that we find them all the --

4 COMMISSIONER OSTENDORFF: No, I understand. I was not
5 expecting that. I was just trying to see is progress being made? Because to me,
6 that's just a fundamental --

7 MICHAEL HAY: Yes, it is being --

8 COMMISSIONER OSTENDORFF: You can't get the design control
9 piece done, then I'll stop.

10 MICHAEL HAY: Correct.

11 COMMISSIONER OSTENDORFF: That's just a fundamental core
12 attribute we'd expect of the license.

13 MICHAEL HAY: Yes. There has been a lot of work in those areas,
14 but I will say that we haven't completed our inspections for that yet.

15 COMMISSIONER OSTENDORFF: Okay.

16 ELMO COLLINS: Just add real quick. Related to that quality
17 assurance and quality control aspects of implementing the modification and all
18 the aspects of that, implementing at the post-mod testing, I think we haven't
19 inspected it yet though, but we understand there's significant corrective actions in
20 that area, and we'll be inspecting that as well.

21 COMMISSIONER OSTENDORFF: Okay. During the first panel
22 today, numerous Commissioners had discussions in the Q&A piece with OPPD
23 and Exelon about the status of the operating service agreement between the unit
24 and the fleet operator. And we heard a lot of discussion from the first panel's
25 perspectives as to how that's proceeding. I wanted to kind of get your

1 independent check and know how are things going from where you sit? And I'll
2 open it, maybe, Louise, did you want to start out with that one?

3 LOUISE LUND: Yeah. The interactions that we've had with OPPD
4 and Exelon, I think that -- I have thought that it's worked very well and their
5 regard for the reasons that they cited, particularly in bringing more of a fleet
6 experience to what it is that they are doing, and as far as the management model
7 and, you know, improvements. I was going to mention, actually earlier, as far as an
8 anecdote about the safety culture aspect. When I went to visit on site and I was
9 meeting up with the rest of the panel in the parking lot, and obviously I didn't
10 have any designation of being with the NRC, and I'd gotten out of the car. I was
11 walking there and had someone from site walk up to me and say, you know, "You
12 need to be walking in the crosswalk. You know, safety is important at this site."
13 You know, I was very, you know, I'd been to a lot of sites and I think this was the
14 first time that somebody, you know, came up to me, totally out of the blue and
15 basically corrected me in that way -- that I wasn't, you know, doing things
16 according to, you know, the -- you know, I think from my perspective, I've seen
17 some early benefits from that. Mike, do you want to comment?

18 ELMO COLLINS: Well, I'd just like to add to what Louise said. I
19 believe we could give a number of examples where we've seen the performance
20 change at the site, positive examples. And one of the challenges we've had is,
21 for ourselves even, is remembering that OPPD is the licensee, and so when we
22 engage -- once the agreement was finalized, we endeavored to engage anyone
23 who had been brought in from the Exelon organization as licensee employees
24 and approached them that way. So -- because they are the licensee and we
25 need to keep that clear.

1 COMMISSIONER OSTENDORFF: Thank you for providing that
2 reminder to us. It's helpful. I won't ask a last question, just comment very
3 favorably on your public outreach efforts as well as the dedicated Fort Calhoun
4 website information. I've looked at that. I found it clear and understandable, and
5 I commend you for your efforts in that area. Thank you all. Thank you,
6 chairman.

7 CHAIRMAN MACFARLANE: Okay. Thank you. All right. This has
8 been a very helpful briefing. It's helpful to hear how much work is being done
9 there that you guys are doing, and I especially appreciate your dedication to the
10 mission of the agency: protecting public health and safety. So, very much
11 appreciate it.

12 Let me go to some of the questions about what's going on at the
13 facility itself. And let me just pick up on this discussion that you were having
14 earlier with Commissioner Magwood about the electrical penetrations IN the
15 containment. What do other reactors use?

16 MICHAEL HAY: Well, all reactors use these electrical penetrations
17 --

18 CHAIRMAN MACFARLANE: Right, but what do they protect them
19 with?

20 MICHAEL HAY: Well, the difference is they use different materials
21 that aren't susceptible to being degraded during accident conditions, and
22 therefore you have containment integrity and your electrical wires don't get
23 impacted by the accident conditions.

24 CHAIRMAN MACFARLANE: And how many reactors still use
25 Teflon?

1 MICHAEL HAY: Well, currently we're just aware of Fort Calhoun.

2 CHAIRMAN MACFARLANE: Okay, okay. So this is something
3 that needs to be fixed.

4 MICHAEL HAY: Correct.

5 CHAIRMAN MACFARLANE: And then in terms of these
6 containment issues, can you just give me a little bit of history, when you noticed
7 this, because these aren't the issues that got them to where they are right now.

8 MICHAEL HAY: Right, right.

9 ELMO COLLINS: I'll kick it off, but I think this is one of the positive
10 examples we've seen at this site. An engineer was inside the containment,
11 scoping out some modifications they would need to make for, I believe, what's an
12 ultimately planned power uprate. He was looking at the equipments, the
13 cabinets, and the beams and said, "I'm not sure that they look right," and actually
14 challenged it and went back and looked at the design spec. And so it was a
15 questioning attitude on the part of site personnel to say is this really what it's
16 supposed to be. And they went through the load calculations and they found it
17 wasn't. It was not --

18 CHAIRMAN MACFARLANE: So when did this happen?

19 ELMO COLLINS: This -- what about -- go ahead, Mike.

20 MICHAEL HAY: Yeah, I don't have the exact dates, but these all
21 occurred between like April and May last year.

22 CHAIRMAN MACFARLANE: Okay, okay.

23 MICHAEL HAY: So after they were in 0350 during the discovery
24 phase of their efforts.

25 CHAIRMAN MACFARLANE: Right, okay, okay. That's good. All

1 right, let me see, where else do I want to go with this? Commissioner Ostendorff
2 asked about the fire fixes and where you are with there. What about the
3 flooding? How are they doing with addressing the flooding issue? And I imagine
4 that the Fukushima orders and direction gets folded into this, or not, or?

5 MICHAEL HAY: Well -- you want me to tackle that one? You
6 started to --

7 ELMO COLLINS: Put it in context --

8 MICHAEL HAY: Okay.

9 ELMO COLLINS: [laughs] And I'll hand it to Mike. I think that the
10 flooding issue, the finding we had was actually one of the items at the 50.54 (f)
11 letter was trying to drive. In the walkdown we've asked all our licensees to do,
12 given the current licensing bases, where does a facility stand with respect to that
13 level of protection? Well, that was our inspection finding from several years ago.
14 They did not have the level of protection we thought had efficacy, and so that's
15 very closely related to the walkdown that the licensee is completing, and we are
16 still just finishing up our inspection. I'll let Mike give you the details on that.

17 MICHAEL HAY: Yeah, I see it as, you know, you have the yellow
18 flooding issue and we're still doing our inspections related to those corrective
19 actions, and then the impacts of the actual flood.

20 CHAIRMAN MACFARLANE: Right.

21 MICHAEL HAY: And I will tell you that we've -- you know, the
22 licensee has, I think, just about completed all of those actions. There's a few left
23 but just about all of those are complete and we've completed our inspections with
24 a large majority of those activities. So with respect with the impact of the flood, a
25 lot of the work's already been done. There is some geotechnical analysis that we

1 are still reviewing that deals with, you know, below-grade, you know, what's the
2 impact on the soils and the structures and whatnot. It doesn't appear that there's
3 any issues there yet. But like I said, our experts are still looking at that sort of
4 analysis.

5 CHAIRMAN MACFARLANE: [affirmative]

6 MICHAEL HAY: And with respect to Fukushima, you know, the
7 licensee is, like they talked about, working with Cooper Nuclear Station, and they
8 plan to submit their analysis, I believe -- I forget the exact month, but it's in 2014.
9 Think it's in May or April.

10 ELMO COLLINS: I think it bears considerable weight in my mind
11 that while we didn't want to have the experience -- the flood that we experienced
12 in 2011, it did test the flood barriers up to almost 1,007 feet, which was a
13 substantial test in its own right. And so those results, I think, also flagged a
14 number of corrective items for the licensee to go tackle with respect to
15 penetrations and seals. And so we have a level of confidence at the facility.

16 CHAIRMAN MACFARLANE: Unless the flood goes higher next
17 time. Okay, so you said -- in one of your slides you said you were going to do a
18 safety culture team inspection. So what do they inspect for? Are there criteria
19 that they use? I had a briefing yesterday, I was asking these questions. So what
20 -- exactly how do you inspect for safety culture?

21 MICHAEL HAY: Yeah, I'm going to repeat a lot of what I spoke to
22 Commissioner Magwood's question. Basically the, you know, the essence of
23 what we inspect is depicted in inspection procedure 95-003. And what it has us
24 do is, you know, validate that the licensee performed an independent safety
25 culture assessment on their own, and so that'll be part of it. The next part is, you

1 know, looking at the method that they used, and are we in agreement that the
2 method looked appropriate. And then when we've concluded the method is
3 appropriate and it was performed by an independent group, then we look at the
4 results. And we look at what did the licensee do with those results. And then
5 one of the -- and I won't say one of the most important, but it's definitely very
6 important aspect is we do focus group interviews. And that's a big majority of our
7 on-site time, is where we have two inspectors with typically a group of like 8 to 10
8 folks, and they spend a good hour to an hour and a half with this group going
9 over, you know, how do you feel about the corrective action process? Do you
10 use the corrective action process? How do you feel about raising issues to your
11 management? And you know, there's just a number of different scenarios that
12 they go through to find --

13 CHAIRMAN MACFARLANE: And these are -- these are going to
14 be people without their managers and supervisors?

15 MICHAEL HAY: Correct. Correct. And typically it's random,
16 although if you have insights that there's a certain group that'll like -- you know,
17 like at Fort Calhoun, there might be a certain group that we want to focus on, you
18 know. Then we can organize that focus group depending upon what we want to
19 do, so -- and then after we do our focus group assessments, that gives us
20 indication on, you know, does it align with the licensee's results? And if it
21 doesn't, then we try to look to understand why. And what we're planning to do,
22 since our focus group interviews are going to be happening starting next week
23 and then in February, we're going to get those insights. And then we have
24 another large team inspection that's going to be taking place after that where we
25 can focus on the insights that we get from the focus group interviews, and that'll -

1 - and that'll allow that team to look at human performance, PINR, and safety
2 culture using the insights that we got from the focus group interviews.

3 CHAIRMAN MACFARLANE: Okay, good, thanks.

4 MICHAEL HAY: You're welcome.

5 CHAIRMAN MACFARLANE: Last question. Yeah. Elmo, you
6 know you're in the hot seat. So I'm just interested in the outreach efforts and
7 how well they've been received, how -- what your impressions of the licensees'
8 experience of outreach that we've been doing, and how we can improve. So
9 public meetings, et cetera.

10 ELMO COLLINS: Yeah, I think in general, the environment at Fort
11 Calhoun is very conducive to our -- what I'll call kind of our standard
12 methodologies of outreach. We just -- there's just a number of them we have to
13 do, and we tried different tools and different types of meetings, Category 1
14 meeting with the licensees, poster board, I think, workshops were mentioned,
15 and then outreach to individual organizations and individuals. We've -- I -- the
16 licensee -- I'll just give my observations with OPPD, is they have -- they've also
17 conducted their own extensive, sometimes in parallel with us and also a lot on
18 their own that we're just not cognizant of. We've had more interest at Fort
19 Calhoun than we've ever had at the site in my history of a long time with Region
20 IV.

21 CHAIRMAN MACFARLANE: Sure, makes sense.

22 ELMO COLLINS: This has brought out some attention and some
23 engagement that we haven't had, so we -- but I think the meetings have been
24 informative and that people are getting their questions answered, so...

25 CHAIRMAN MACFARLANE: Okay. Okay. Lessons learned? I'm

1 over time.

2 ELMO COLLINS: Right. Well, I'll take --

3 CHAIRMAN MACFARLANE: Maybe Louise wants to jump in.

4 Yeah?

5 LOUISE LUND: I just want to make a comment too.

6 CHAIRMAN MACFARLANE: Yeah.

7 LOUISE LUND: I think some of the concerns that were raised were
8 really not within our purview, like electricity rates and something else. They had
9 had board meetings that were scheduled pretty close to that time period, so that -
10 - you know, I think one of the lessons learned was being able to point out to, you
11 know, some of the attendees that their concerns may be best addressed by
12 going to -- because they were also public meetings as well, so -- you know, to
13 basically put it at the right meeting, because some of these concerns, although,
14 you know, we would hear the concerns and we'd, you know, explain, you know,
15 what to do, we also want to make sure there was a venue as well.

16 CHAIRMAN MACFARLANE: Right. Okay, thank you.

17 Commissioner Svinicki?

18 COMMISSIONER SVINICKI: Thank you all for your presentations.
19 And Louise, are you the one who subbed for Tony today, or is that Mike? Okay.
20 So thank you. I know that we have a late-emerging flu season, so I hope it's not
21 that. But Elmo, you had mentioned that Tony Vogel has a lot of work to do, so
22 you need him to get well, and I -- that made me pause and reflect for a moment
23 on all the work that faces the agency, NRR certainly has its hands full. But I think
24 that Region IV, I want to add to Chairman Macfarlane's recognition that it's
25 evident what a strong focus there is on the public health and safety mission of

1 the agency by NRC employees generally. But I wanted to commend you and all
2 the people, the women and men in Region IV that you are leading. It isn't just
3 Fort Calhoun that's keeping them busy. The region is very busy, and it is not
4 possible when we are budgeting and resourcing two years out to know with a lot
5 of fidelity exactly what will be needed.

6 Mr. Borchardt was kind enough in his opening remarks to address
7 my question about resourcing for these types of emergent needs, and he
8 expressed that there is the ability between regions and also with technical
9 experts from headquarters to augment and be able to give you the surge
10 capacity that, you know, he -- I don't want to react to 450 either, but it's a large
11 number, and so the agency needs to be able to resource that. It's not something
12 I think we can predict, you know, years out in advance and even at this point, we
13 don't know exactly when we'll get indications of the licensee's readiness to have
14 us come and do the inspection oversight.

15 So I know that Region IV is an organization, I think, that is, I won't
16 say on the hot seat, but definitely, you know, under just a stress from level of
17 activity. And so again, I -- we sit here at this table and we see a few different
18 faces, but really, you all are representing the work of hundreds of people, in your
19 case, and so I just want to, I guess, send my props and my shout-out to Region
20 IV and really thank them. I think right now they're being called upon in a unique
21 way to support a lot of the important agency initiatives. So thank you, and please
22 take that back to your staff, I wanted to recognize them.

23 You know, I talked about there is a lot of activity, and I talked about
24 all with the OPPD and Exelon panel, all of the resources, the influx of that and all
25 of the focus and expressed that I think that, given the right focus and resources,

1 most organizations are able to have improvement, but that sustaining
2 improvement is something that arguably, in some instances, may be the greater
3 challenge than achieving improvement, is sustaining it. I didn't know if there
4 were any insights. Most of you have worked with various licensees and stations
5 that at different points in their cycle maybe are performing better or being more
6 challenged in their performance. Is there anything that you would add as far as
7 our oversight? I know that the reactor oversight process is set up in a way that it
8 is our purpose to try to find indications of things before they become larger
9 issues. But could you share to the extent you'd like to just any of our regulatory
10 approach to that issue of sustainment?

11 ELMO COLLINS: I -- two thoughts. One you've already heard this
12 morning from the previous panel, and that's just that my characterization is it
13 takes energy to sustain that performance, and it -- so it has to be continually
14 injected. It can't be taken for granted. Nuclear -- in these technologies and age,
15 you never arrive. It always has to be applied, and it takes energy.

16 And then the second, you know, perspective for us is how the
17 reactor oversight process engages or doesn't engage. It does have a -- the
18 premise behind it that, you know, issues will manifest themselves and risk-
19 significant items before substantial deteriorating performance. And actually, we
20 saw some of that, quite a bit of that, at Fort Calhoun. We actually did -- the
21 licensee did transition over in the process, and so it was -- it was working. The
22 receptiveness, though, of facilities to input, which goes hand in glove with the "it
23 takes energy to keep the site sustained," I believe, so the energy and the
24 receptiveness to input are necessary for excellence.

25 We're going to see a lot of, I'll say, compensatory measures put in

1 place, I'm sure, at Fort Calhoun, that I don't think they've all yet been developed,
2 and so -- and so at some point in time, then they'll start -- there'll be a tendency
3 and a desire to scale back, and there -- then so there's a necessary -- I think
4 resulting less energy. And so how does the infrastructure maintain what was put
5 in place? That's been a challenge we've seen at other facilities.

6 COMMISSIONER SVINICKI: Thank you.

7 BILL BORCHARDT: And I'll just add that, you know, plant restart is
8 an important milestone, but it's not the destination, and it's certainly not the
9 destination for us, nor is it for the licensee. So as the plant gets authorized to
10 restart and it begins operation, we'll have a very thoughtful and methodical
11 transition to the Reactor Oversight Program. It doesn't happen instantaneously,
12 because of course, performance indicators aren't racking up new data, so we
13 need a very thoughtful transition period. There will be enhanced inspection,
14 enhanced oversight from both the region and headquarters for a significant
15 amount of time after restart, and then monitoring of sustained performance,
16 improved performance, will be the focus of our inspection program, and I suspect
17 the focus of the management and staff that operate the facility.

18 COMMISSIONER SVINICKI: Thank you. I think that's really
19 helpful. I have seen that in some of the licensees' documented submittals --
20 docketed submittals that have talked about the performance improvement, and
21 there are -- there's extensive information about post-restart activities, and we
22 have a companion process to that as well, so thank you for mentioning that. It's
23 a very, very important point.

24 I would just mention on the outreach, I -- to share my perspective,
25 that it may be that there's not a good understanding or calibration on what it is to

1 have an average of 150 people at some of these meetings in Nebraska, which I
2 think was the -- was the number that was mentioned. I -- in some areas of the
3 country, is it not true that we will have a public meeting that will have maybe --
4 you can count the members of the public on the fingers of one hand. I mean,
5 that's not unheard of. That way it doesn't sound like I'm being a little bit
6 lighthearted about it, but we sometimes just get maybe six or seven people,
7 something like that. And so that the presenters so overwhelm the number of
8 people in the audience. So I think that is very -- it would certainly, when you say
9 this is the higher level of interest, that certainly those kinds of numbers certainly
10 indicate that.

11 And then I just have one other question. You heard me talk about
12 left turns earlier, and so that's an indication that I try to listen very, very closely to
13 both the presentations and the Q&A with my colleagues, and so I need to be
14 certain that I understand or that the record is clear. Mike, when you were on your
15 slide seven, current status, I think you might've departed from your presentation
16 and were paraphrasing a bit, but I took a pretty careful note here. You
17 mentioned multiple greater-than-green security findings, but you went on to say
18 these multiple greater-than-green security findings, quote, "haven't gotten much
19 attention." And that was -- I wrote that down and tried to be very precise about
20 that. Obviously, we'll have a transcript later. Who is it that you feel has not -- are
21 you stating that there are security-related findings that either NRC or the licensee
22 is not attending to? Is that your testimony?

23 MICHAEL HAY: No, actually, and this goes from my days as a
24 branch chief in charge of security. We're very careful about what we put out to
25 the public related to security findings, and so my comment has no reflection on

1 the amount of effort that the licensee or the NRC has taken related to these
2 issues. It's more with the -- with respect to the fact that we just don't talk about it
3 out in public because of the sensitive nature of the information.

4 COMMISSIONER SVINICKI: Okay. I appreciate it. Because I
5 think the precision in how we communicate that is very important. I -- it's been
6 my observation that for those NRC personnel that work on these issues that
7 there is -- I don't think that they would agree that there's not a -- there's any lack
8 of attention to it. The licensee, my sense is that we require that they take it very,
9 very seriously and compensatory measures are needed. And so I just -- I know
10 that there are the necessary and requisite withholdings that we have for security-
11 related information, but I didn't want to leave the impression that we neglect
12 security and security-related findings. That's certainly not my experience.

13 ELMO COLLINS: I made the same -- annotated my notes the
14 same way. Maybe "visibility" would've been a better word. They're getting
15 significant amount of attention on the part of the NRC and the licensee.

16 COMMISSIONER SVINICKI: Okay. Thank you. Well, thank you
17 all again. Thank you, Chairman.

18 CHAIRMAN MACFARLANE: Commissioner Apostolakis?

19 COMMISSIONER APOSTOLAKIS: Thank you. I'm a little
20 confused about the issue of penetrations, containment penetrations. Elmo said
21 that containment isolation is a safety function. I believe you, Mike, said that there
22 are some non-safety-related penetrations? Are these consistent?

23 MICHAEL HAY: Well, I think when you say "isolation of
24 containment," you're talking like a piping system and you'd have a valve. What
25 we're talking about here is electrical penetrations, where electrical wires go

1 through a steel tube --

2 COMMISSIONER APOSTOLAKIS: Yeah.

3 MICHAEL HAY: -- and there's a Teflon plug on each side of
4 containment. One's an inboard plug, and one's an outboard plug. And the
5 concern is, under high-radiation conditions --

6 COMMISSIONER APOSTOLAKIS: I understand the concern. But
7 are all these penetrations safety-related? Yes?

8 ELMO COLLINS: Let me take a stab at it. From a containment
9 isolation and containment -- well, containment isolation, containment integrity
10 perspective, they are. The actual penetration piece, that containment function is
11 a safety-related function.

12 COMMISSIONER APOSTOLAKIS: Okay.

13 ELMO COLLINS: So we're talking two -- but potentially two safety-
14 related functions. Now we also have the electrical wire going through the
15 penetration, which will need to activate a component inside the containment.
16 That component activation could also be safety-related, and so there's actually
17 two considerations we have at the same time.

18 COMMISSIONER APOSTOLAKIS: But there isn't such a thing as
19 a non-safety-related --

20 ELMO COLLINS: Not from a containment penetration safety
21 function.

22 COMMISSIONER APOSTOLAKIS: There is no other function.

23 ELMO COLLINS: That's correct.

24 COMMISSIONER APOSTOLAKIS: Okay.

25 [laughter]

1 ELMO COLLINS: The electrical wire may be non-safety related but
2 the penetration is safety-related. That's correct, thank you.

3 COMMISSIONER APOSTOLAKIS: Now, the -- again, I believe,
4 Mike, you mentioned that the National Laboratory identified the issue of Teflon
5 degradation in the '80s. And then I believe you also said that it was one of our
6 inspectors -- no, Elmo said one of our inspectors was in the containment. He
7 looked there at the penetration. "Hey, this doesn't look right." That's what you
8 said.

9 CHAIRMAN MACFARLANE: Licensee.

10 COMMISSIONER APOSTOLAKIS: It's not the penetration?

11 ELMO COLLINS: I believe I was referring to the -- to the beam, the
12 containment internal structure. If I miscommunicated, I apologize. Licensee
13 engineer that the --

14 COMMISSIONER APOSTOLAKIS: When was the Teflon identified
15 at Fort Calhoun, that there was Teflon there? When was that identified?

16 MICHAEL HAY: It was identified last year by the licensee.

17 COMMISSIONER APOSTOLAKIS: Now, the question is, if the
18 National Laboratory says in the '80s that there may be a problem with Teflon,
19 why is this identified as an issue in 2012? What happened in between? Didn't
20 you guys ask the licensees to go and check if they have Teflon?

21 MICHAEL HAY: Actually, in the '80s, I believe, we -- the NRC
22 wrote an information notice that informed all licensees of this problem to try to
23 ensure that they would take the right actions, and it's our understanding that all
24 licensees did replace these penetrations, with the exception of Fort Calhoun.

25 COMMISSIONER APOSTOLAKIS: Why was Fort Calhoun an

1 exception?

2 MICHAEL HAY: Because they made a decision that they would
3 replace the penetrations that dealt with safety-related electrical loads, but the
4 non-safety electrical loads wouldn't need to be replaced, so they didn't identify
5 the fact that the penetration didn't support the containment function.

6 COMMISSIONER APOSTOLAKIS: I don't know. I am really
7 perplexed here. I'm trying to understand why an issue that was identified in the
8 '80s was still an issue in 2012.

9 BILL BORCHARDT: I think we're -- we would need to do a little
10 study of the situation and look at inspection reports and perhaps some SERs.
11 We can provide you some follow-up, because I think we just need to --

12 COMMISSIONER APOSTOLAKIS: I'd appreciate that.

13 BILL BORCHARDT: -- at this point.

14 COMMISSIONER APOSTOLAKIS: Yeah. Please send us
15 something to clear it up. Now, again, another issue that confuses me a little bit.
16 What is the role of ROP? Is the role of ROP to give us guidance as to how
17 safety-related -- safety-significant findings are? Is it also its role to tell us where
18 to look or what, and why are we finding things like you said, Elmo, the inspector
19 said, "It doesn't look right to me"? If it was another guy, maybe he wouldn't have
20 said that. So is ROP -- it needs to be supplemented by something else? I
21 thought it was a major achievement having the ROP, and maybe it still is, but I...

22 ELMO COLLINS: I think we -- obviously part of the 0350 and the
23 95-003 process is to take a look back at our oversight processes leading up to
24 the day's performance issues at Fort Calhoun and what lessons learned can we
25 glean from that. But in terms of how the reactor oversight process is defined, it

1 has -- it is a defined baseline inspection program, but even within those
2 inspections, there's a sampling that occurs. The containment -- the component
3 design basis inspection and engineering inspection was really aimed at -- for
4 passive components from the Davis-Besse. But it's a sampling, right? It doesn't
5 say, you know, go look at this system in this way. We try to inform that as best
6 we can, but we pick -- we pick those components and try to understand the
7 design basis and how it's applied, but it's not a 100-percent validation of facilities.
8 So we have a -- we have a defined program, it's risk-informed, it's a baseline
9 inspection program, and it's implemented, but it -- but it's only sampling by basis.

10 COMMISSIONER APOSTOLAKIS: My question or maybe my main
11 concern is, to what extent do I have to rely on people like this inspector who said,
12 "This doesn't look good to me"? What -- is that essential for us to rely on people
13 like that, or is there anything else we can do? I mean, of course, don't tell me
14 that we have to have good inspectors, I know that. But when I have ad hoc input
15 like that, because a guy happened to be very good and he also happened to look
16 there, that worries me a little bit.

17 BILL BORCHARDT: Well, you know, I think as Elmo has said, it's a
18 sampling program after initial licensing, that the Reactor Oversight Program and
19 the baseline inspections. It doesn't eliminate the possibility of having special
20 inspections, and it's -- there's a continuous feedback process of taking operating
21 experience and assessing through our annual review of the Reactor Oversight
22 Program and then the inspection procedures that support that to see whether or
23 not there needs to be revisions. After Davis-Besse, we went -- the agency went
24 on a very concerted effort to validate and verify the design bases at nuclear
25 power plants. It's a challenge in the United States because there's so many

1 different designs and -- but the inspection program tries to establish a
2 consistency of the baseline program so that we can compare the performance
3 amongst various plants, and then the ROP also lets us allocate resources based
4 upon those inspection findings and the performance indicator data that we have.

5 COMMISSIONER APOSTOLAKIS: Go ahead.

6 ELMO COLLINS: What I'd like to add to what Bill has said, one of
7 the -- your question seems to point to one of the underlying pillars of the Reactor
8 Oversight Program, or basic assumptions, and that is that the licensee has a
9 viable and reasonably effective corrective action program. Because it can't -- it
10 can't come down to NRC inspectors identifying everything that's not correct at a
11 facility. We need the licensee -- but we do need the licensee to go out and do
12 that job and do it thoroughly and do it very well. And so there is a component to
13 ROP as well where we try to understand through our inspection how well they
14 are doing that by our sampling inspections.

15 COMMISSIONER APOSTOLAKIS: Why did you characterize it as
16 a sampling process? What do you mean by sampling?

17 MICHAEL HAY: Well, I mean, I'll just give you my perspective as
18 an inspector in my past life. You know, you've got a procedure that tells you to
19 do 12 surveillance inspections per year. The licensee does a few hundred
20 surveillances every year, and I need to pick 12 that I'm going to inspect. So I'm
21 sampling a fraction of these surveillances that the licensee performs.

22 BILL BORCHARDT: It's the inspection procedures that support --
23 that provide the foundation for the inspection findings that go into the ROP
24 assessment process. We don't have -- there is no activity, no function, no
25 verification that the NRC does through inspection that is a 100 percent. There

1 might be an inspection, right, that looks at penetrations.

2 COMMISSIONER APOSTOLAKIS: But that was part of the
3 baseline inspection, which you just said?

4 MICHAEL HAY: Yeah, that's baseline, yeah.

5 COMMISSIONER APOSTOLAKIS: Which then goes to the ROP.

6 MICHAEL HAY: Well, it's part of the ROP, yeah.

7 COMMISSIONER APOSTOLAKIS: If I look at it -- if I look at the
8 ROP itself, it has performance indicators, and it has all sorts of other things:
9 inspections, sirens, this and that. That's not a sample. That's fairly complete in
10 my mind, what's there.

11 BILL BORCHARDT: No, the inspection findings, which are part of
12 the ROP, right, performance indicators and inspection findings, those inspection
13 findings are based upon a sample of activities and systems that --

14 COMMISSIONER APOSTOLAKIS: Okay. Right. I will yield the
15 point. Thank you Madam Chairman.

16 CHAIRMAN MACFARLANE: Any further questions? Okay?

17 COMMISSIONER MAGWOOD: Don't want to make a habit of this,
18 but just two things. First, I wanted to mention that it was actually -- I think Elmo
19 mentioned earlier that it was actually a licensee personnel that picked up on the
20 structural issue in containment. It wasn't, you know, during inspection, so I'll just
21 pick that up. But I also, as we're creating a meeting record, just to sort of get this
22 nailed down, I think Commissioner Apostolakis asked for a CA note or something
23 to give us some information about this Teflon issue. Could you also add to that
24 anything related to generic application of the -- of the concern and whether we
25 should be putting out a notice or something of that nature? So just to make sure

1 the meeting notice picks that up. Thank you. Thank you, Chairman.

2 CHAIRMAN MACFARLANE: Anybody else?

3 COMMISSIONER APOSTOLAKIS: I'm still confused.

4 [laughter]

5 ELMO COLLINS: You get another shot at me this afternoon.

6 ALLISON MACAFARLANE: All right. Well, in that case then, I will
7 thank everybody for their informative presentations today. I think we've seen that
8 there's been a fair amount of work done at Fort Calhoun. There are challenges
9 that remain, and I look forward to hearing about the progress at Fort Calhoun
10 Station in the future. We will be paying attention to what's going on there. And
11 then with that, I think we will adjourn. So thank you very much.

12 [whereupon, the proceedings were concluded]